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MASON F. COGSWELL, M.D.
Late of Albany, N.Y.

Oliver Bartholomew Albany

TRANSACTIONS

OF THE

MEDICAL SOCIETY

OF THE

STATE OF NEW YORK,

FOR THE YEAR 1865.

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ALBANY:
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1865.

Upon the second day of last April our State Medical Society met with a sad loss in the death of its Secretary, Dr. Sylvester D. Willard. No man had been more interested in its prosperity or done more for its advancement. It is mainly to his zeal and indefatigable activity that the Society is indebted for its present high position. He was familiar with all its workings, and to perform the duties of the secretary seemed rather a recreation than a task. Knowing his efficiency, it was with great reluctance that I consented to become his successor.

Through the confusion necessarily attending the selecting and arranging of Dr. Willard's papers, the Manuscripts for our Transactions did not come promptly into my possession, therefore the printed volume has been delayed beyond the usual time, notwithstanding our efforts to place it before the Profession at an early date.

We invite particular attention to the subjects for Prize Essays on page 364. A spirited competition would prove a stimulus to the Society.

WM. H. BAILEY, *Secretary.*

Albany, *Nov.* 1*st*, 1865.

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State of New York.

No. 100.

IN ASSEMBLY,

February 10, 1865.

TRANSACTIONS

OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

To the Hon George G. Hoskins,

Speaker of the Assembly:

Sir—I have the honor herewith to transmit to you the Transactions of the Medical Society of the State of New York for the year 1865.

Very respectfully,

Your obedient servant,

SYLVESTER D. WILLARD,

Secretary.

Medical Society of the State of New York,
Albany, *May* 8, 1865.

The following papers have received the approval of the Committee of Publication.

Thos. Hun,
Howard Townsend,
Wm. H. Bailey,
Committee of Publication.

TRANSACTIONS.

ARTICLE I.

Annual Address before the Medical Society of the State of New York, February 8, 1865.
By FREDERICK HYDE, M. D., of Cortland, President.

Gentlemen of the Society:

Again are we assembled to commemorate once more the anniversary of our society. The representatives of the medical profession of the State of New York, we are here amid mutual congratulations, receiving and imparting words of cheer.

We are charged with kindred duties and responsibilities, bearing with us our best offerings to mingle them upon the common altar of our beloved profession.

Following the example of the fathers of this society, who wended their long way to its meetings with but few in number, we, from our respective fields of labor, in a few hours find ourselves gathered here with a larger attendance than belongs to any other State medical organization.

Permitted as we are through a merciful Providence to be witnesses to the steady, solid growth of this society, and the increasing interest evinced in its purposes, how can we forget to remember gratefully its early founders and those, who subsequently under much trial and sacrifice, watched over, and cared for its welfare with increasing solicitude?

Who of us remembers his first meeting in this society, with other than the choicest recollections?

Coming into the presence of its members, hearing the names of Ely, Williams, Van Olinda, Bay, Beck, Hull, White, Spencer, Eights, Wendell, McNaughton, Frary, Taylor, Green, Gilman, Corliss, Willard, Staats, West, Blair, Blatchford, March, Brown, and others, watching their deliberations, their masterly singleness of purpose, how could one but revere those savans?

He could but feel that it was indeed an honored niche in his professional career when his alliance was complete with so worthy, so noble a membership.

It needs no apology, as memory recurs to the departed of this number, for the dropping tear, nor for warmth of emotion, when we see so many of its devoted members are spared to honor this assemblage.

The essential interests of this society have come to us as a precious heritage hallowed with fragrant memories.

The relations we hold to it impose upon us obligations of fidelity if possible more weighty than those borne by our worthy predecessors.

To merely maintain this society in its present vigor is not all that it rightfully claims at our hands.

We owe it to ourselves not less than to those whose faithful labors guarded it so well, that, through our properly tempered care, the interests of medical education and of this society, shall be made to blend so kindly that both may attain a higher life. Is it not certain that the more useful labors of this society are dependent upon the improved condition of medical education? Its mission now, as in the past, is to subserve, in the purest manner, the cause of professional truth. How then shall it achieve its highest possible capacity for such deeds, as shall give increasing lustre to its coming history? It may be answered, that since it has multiplied so largely its numbers, it has, in the same ratio, increased the value of its labors. Granting this to be true, does it not follow, that possibly there may be hindrances, and of a character too, which, if removed, might result most favorably to the cause of medical education? The public sentiment of the medical profession, for a considerable period, more especially since the organization of the American Medical Association, has been thoroughly directed to the medical schools of the country, for the purpose of improving their condition to enable them to give better facilities for a more thorough and complete system of instruction. That these efforts have resulted favorably, cannot well be doubted. We do not think it unreasonable to claim for our medical colleges that they are contributing, with a commendable zeal and ability, their full share towards the weal of medical education. Under our present system of medical pupilage, by far the greatest proportion of students, who make up the classes receiving instruction through lectures, are registered as the pupils of physicians not connected with the teaching corps of the schools. The established usage by which students are received, varies but slightly in all the medical colleges; the candidates bear with them the same credentials, the common passport to class membership. To what degree of attainments have they arrived, when they come to register their names as college students? Instead of a fixed standard, it is found to range from that of a well qualified graduate of a literary college, to one almost destitute of even the elementary parts of a common school education. But, still, they have now passed the common threshold to the study of the same branches of science, with qualifications as unlike as their persons are in external appearance. Here then is a difficulty, which the

schools are to meet at the outset of every session of lectures, for which no provision is made in their corporate powers; its disposition being voluntary on the part of the respective faculties. Every student, as well as his preceptor, expects, upon complying with the terms of matriculation, that he is to be at once an accepted member of the class, entitled to the same common rights. Here then with this wide discrepancy in qualifications, stands the student, thoroughly disciplined in mind, beside another, almost wholly destitute of mental training, to enter upon the study of the same sciences, the mastery of which, to a certain degree, is to be acquired in the same limited period of time.

Allowing liberally for all native differences in the ability of students to acquire, without regard to previous discipline, it will still follow, that those with good preliminary training, with equal labor, will hold a decided advantage over those who are destitute of such attainments. While there are some, with very limited preliminary learning, who have acquired a lasting fondness for study, and have become winning competitors in professional learning, it still holds true, that such deficiencies are rarely wholly overcome, and, at best, are attended with decided disadvantages through future labors. There are still other considerations connected with medical pupilage, bearing directly upon the present and future welfare of this society, and the whole subject of medical education, to which it is our purpose more particularly to advert. Is the general mode of conducting private medical studies adequate to the object in view? Does it sustain strictly the true relations of preceptor and pupil? It will be remembered, that medical students in our State are legally required to pursue their studies faithfully for a definite period before they can be candidates for graduation. How far this rightful claim is complied with, according to the more common method followed by preceptor and pupil, is an inquiry worthy to be pursued.

While it is true, that many physicians do act strictly in accordance with the office of teacher to their students, it cannot be denied that a much larger proportion do so but loosely, and, in many instances, there is an utter want of semblance even to the functions of a teacher. In many cases, the students occupy the offices or nominal places of study as much or as little of their time, as suits their own pleasure or convenience, and that too, without the least regard to order of study. They choose, for themselves, the branches, on which they spend their reading, making it, more a miscellaneous perusal of books than a patient, laborious, systematic labor for the acquisition of scientific truth. It is not unusual that students, for months and sometimes for years, pursue their studies in this manner, devoting much more of the

little time they do read, to the more advanced or practical departments, than to the fundamental or primary parts of medical education. So is it common too, in this form of pupilage, that preceptors permit more of their student's time to be occupied in practice, than in the study of the foundation truths of real professional learning. While this plan of directing the labors of the student is a perversion of the true object of the prescribed terms of pupilage, sure to result in meagreness of the knowledge he most needs, it will prove, if possible, a still greater misfortune, in the faulty habits of application it begets, so incompatible with the mental discipline necessary to the cultivation of medical learning. Those who pursue their studies in this lax manner, come to enter upon their lectures, much more familiar with a species of practice than with the elementary sciences of medicine. Students, who have been thus unfortunately inducted, are liable to be found among such as become over-anxious to discover some short route, by which they can more speedily become full-fledged Doctors. Their conceptions of future professional success, are too apt to lead them to believe it consists in strategic plans for securing the largest number of patients. Early imbued with these views, it can scarcely be expected, should they receive diplomas, that a careful, studious devotion to their profession would receive from them more than secondary attention.

Not the least of evils resulting from this loose pupilage, is a want of professional allegiance, in later life exhibited so flagrantly by those who ally themselves with the various forms of medical heresy. For these truly disastrous consequences, students are by no means chargeable with the greater responsibility. This rests with those acting in the nominal capacity of preceptor, while its duties are wholly overlooked, or but imperfectly performed. The original blame is with us who received these pupils, for while more amenable for their proper direction, not less are we for the results. The faithful discharge of our duties demands, when there is either intended non-compliance with our just requirements, or incompetency on the part of students, that we sever at once the relation both for their good and the honor of our calling. We may urge in palliation on our part, that we cannot, in the crowd of engagements, possibly find time to hear recitations and give instruction. When we accept candidates applying for medical tuition, should it not be done on terms to ensure it on our part and to receive it on theirs? It is not to be expected, when young men apply for places as medical students, that they are always thoroughly and correctly advised in reference to the entire enterprise they are contemplating. It is our first duty to spread before them clearly its character and scope, the

exclusive labor its successful prosecution involves, and to learn, too, the motives under which they are acting. By the proper observance of these precautions, while some very likely would be deterred from becoming our pupils, others would be the more ready to negotiate with us, whose fitness and purposes would much better accord with such standards of tuition as we are strictly bound to erect. Commencing with this frank, mutual understanding between preceptor and pupil, the duties of each would be more thoroughly discharged, and give much fairer promise of attaining the true object of both. Should every physician, when he takes a student into his office, adopt the rule of arranging the order of his studies, and of requiring and hearing recitations regularly, would he more than comply with the expressed obligations of his position?

We are required to certify that our students have pursued the study of medicine and surgery diligently, the legally prescribed period, to entitle them to an examination for the degree of doctor of medicine, or for a county license. In what faith we are acting, and how valid these papers are when given without ever having heard a single recitation, and, in some instances, unable to say even what books or branches have been read, may be best answered by those who have given such indorsements. To medical students, the importance of system in study, with frequent recitations, can scarcely be over-estimated. The most industrious, who prosecute their reading without recitations, will fall far behind those of like application and ability, who receive this thorough drilling. While these are a review, and serve to impress on the mind a more orderly array of the facts, so do they qualify to communicate knowledge by which students themselves acquire evidence of the amount and correctness of their own attainments. It is an established rule in all our literary institutions, most rigidly enforced too, requiring the strictest punctuality in recitations.

It certainly cannot be claimed, that medical studies are less important than those pursued in academies and literary colleges. When we bear in mind that the member of the latter is receiving his discipline as a preliminary qualification, that he may more successfully learn medicine, theology, law, or some other avocation, we shall find no good reason for justifying any less severity of discipline in medical studies than is required in the best preparatory schools. When the graduate comes from the literary college with his diploma, does he, or the young doctor of medicine, enter upon the most important mission? In which will the exercise of vague, indefinite acquirements be most serious? The duties of one restricted to persons in health mainly, while those of the other are at once directed to morbid

conditions of both body and mind—entrusted forthwith with the issues of life. Errors of duty in any calling are an evil, but in none are they fraught with so much peril, as when they come from the hands of those serving under the accredited panoply of the healing art. It may be said that the course of instruction pursued in literary and medical colleges is not the same, the latter being restricted to lectures, and in session only a portion of the time. Does this lessen the necessity of a rigid system of study, because students are not in attendance upon lectures more than half the time in a single year? This long interval between the sessions of most of the medical schools, is for the very purpose of giving opportunity for thorough reviews with recitations. It is not intended, neither is it so well for students, while in attendance upon lectures, to devote largely their time to reading, if they would receive their full benefit. There is much that cannot be learned in the public or college lecture room so well as in the library, under the supervision of a faithful private instructor. Is it not the concurrent opinion of public teachers that but little time is required, after the assembling of their classes, to enable them to distinguish between those who have received the proper previous drilling and those who have not? So will the difference be equally apparent in those who have had previous lectures, as they have spent the interim, exercised in recitations, or in promiscuous reading and practice, without this discipline. With the increased facilities for public medical instruction, the tendency has doubtless been, on the part of physicians and students, to rely more upon these means and less on those furnished by private offices. Each mode still has its advantages, and while those derived from the college teachings are indispensable, so are those of a more private character equally necessary, and should be cultivated in proportion to the relation they bear to the great work of perfecting medical education. It will not be denied that students may, by giving sufficient time and application to lectures, be able to graduate creditably, with but very little close study, while not in attendance upon the college sessions. Admitting this to be so, does it not follow, if their training had been more severe and extensive during this long period unoccupied by them in the college duties, that they would have been better qualified practitioners, and more thoroughly wedded to an earnest study of their profession? When we remember the influence exerted by the preceptor upon his pupils, how much their future character, and all pertaining to their professional life, is moulded by this power, it will be obvious that its bearing is too direct to allow it a careless or trifling consideration. If students are taught by precept and example that the leading object of their pursuit is to give

them adroitness in devices for acquiring patronage, and they enter upon the practice of their calling with this their ruling motive, it will be among the rarest events that they should ever abandon such a course for that of the ardent student, seeking only such triumphs as the faithful application of his increasing knowledge shall give him. It has been urged by medical men, not identified with the duties of public teaching, that it was not their vocation to teach, that it should be done by the professors of the medical schools. This apology will not answer for the neglect or careless performance of duties on our part, so long as we accept students, and certify that we have given them the required instruction. Whatever may be our qualifications, while we are acting in the capacity of preceptor, we should meet its obligations in good faith, or decline them altogether, to be consistent with the excuse just offered. The duties of the public teacher or lecturer and the private instructor have their mutual and relative importance, and should be maintained and closely observed under our present system of medical instruction. While those engaged in public teaching may be better qualified to discharge such duties as come within their own proper sphere than others not thus occupied, it is equally true that the latter, whose time is devoted mostly to the practical cultivation of their profession, have ample fitness for giving the required instruction. In urging thus far a more strict observance of the clearly implied duties of the medical preceptor, we have only alluded to considerations identical with the best interests of pupils. We believe it will be conceded that physicians who furnish facilities for instructing students, just in proportion as they comply with the letter and spirit of their office, will themselves derive benefits of essential importance, which can scarcely be supplied to them in any other way. While thus meeting their obligations would incline them more to habits of study, it would enable them also to maintain a familiarity with the more primary parts of medical education, which we must acknowledge we are too prone to neglect.

In the multitude of cares and perplexities of the general practitioner, he is quite sure to restrict his reading more and more to his immediate necessities. With this increasing tendency, he omits entirely before he is aware of it, to review the elementary parts of his education, and what was once familiar to him is now but dimly remembered, if not wholly forgotten. Is there a member of this society, who regrets the time and labor he has devoted to the faithful drilling of his students? Allowing that some so instructed have failed to accomplish what was reasonably expected of them, did not sufficient direct benefits accrue to the teacher, to amply reward him

for his well rendered efforts? The punctual discharge of our duties, in accordance with this view of the case, would necessarily furnish a thorough review of the more fundamental branches of professional learning, which in too many instances, it may well be feared, would never be enjoyed without it. While a rigid observance of the obligations of teacher and pupil cannot be neglected safely to either, its proper respect cannot fail to confer mutual benefits. It may be urged that more time should be given to clinical instruction, and less to recitations of the text books. Our answer to this is, that no part of the entire period of discipline is more important than the earlier, during which, students are not qualified to appreciate this mode of study. A certain amount of knowledge derived from the systematic study of books is positively needed before medical pupils are properly fitted to receive special benefit from clinical instruction. When they shall have become sufficiently familiar with elementary knowledge to observe correctly, then certainly, should both forms of teaching be combined. It would be little better than loss of time to lecture a pupil upon diseases of the eye before he had learned its anatomy and physiology. The attempt to impart knowledge to registered medical students, upon diseases of the thoracic organs, or in the treatment of hernia, or fractures and dislocations, ignorant of the structures involved, and the laws governing them in their normal condition, would be worse than useless ; for scarcely could it fail to result in dangerous assumptions.

When students have acquired the requisite qualifications for receiving clinical teaching with profit, are the preceptor's duties any less binding ? Can we be less exacting of our students when they come to be the actual observers of disease ? We cannot leave the pupil to be his own teacher in this important field of labor, and believe that he will gather its richest rewards. We have said that clinical teaching should be combined with that of the books. We affirm that this cannot be done successfully except through the same orderly, close application involved in the more preparatory studies. The discipline must be continued through the same means, regular recitations. It should be required of students when clinical cases are presented to them, that they should recite to us their observations in language technically correct. To instruct in the truthful interpretations of morbid phenomena is not more our duty, than to inculcate accuracy of detail on the part of the learner. There are two modes of attaining this object ; the one, by oral recital of the lesson, the other, by a written report of it, and as both have their advantages, it is incumbent upon the preceptor that he should confer the benefits of each upon his pupils.

It may be safely declared that the medical teacher can scarcely confer a greater or more lasting good upon those he instructs, than will follow upon so much of his labor as consists in drilling them in the practice of recording correctly and minutely every fact connected with the history of all cases presented to their observation. It may well be said of this plan of discipline, if it be not acquired as a part of the student's habit, it is rarely adopted in later professional life. As in the ordinary recitation, so will it be in the written report if inspected carefully by the teacher, making the needed corrections it cannot fail to give increasing interest and pleasure to the duties of himself and his pupils. When medical practitioners find it necessary for their own discipline to impose upon themselves the duty of faithfully recording their observations, why should it be neglected in the period of pupilage, which of all others is most important in its formative tendencies? When we remember those early, faithfully given lessons, by that beloved preceptor, the implicit faith with which we accepted his precepts, how can we doubt the importance that should attach to the real relations of preceptor and pupil? Will not a large majority of physicians, who serve their calling most worthily, tell us they owe much of their success to their thorough early discipline? Gentlemen, do you believe that the members of our society, who have contributed most to develop its true purposes, spent their early pupilage with instructors, who inculcated the doctrine that laborious, systematic application belonged only to the lecture terms of the college? We grant there are instances, in which the consequences of neglected and illy-directed tuition have been recovered from, but they are so rare as to be only exceptions to the rule. It has been intimated that medical students in too many instances, imbibed inadequate notions of the purposes of their chosen calling. Examples corroborating this view are seen in such as exhibit no other motives than are common to other pursuits, not in the least kindred to the cultivation of the medical sciences. The object, which most of all seems to stimulate them to the hasty acquisition of a diploma, is utterly foreign to that which directs the ardent student.

Further illustrations are found in such as cherish the belief that a medical diploma will ensure them an abundant livelihood, with a life of ease and freedom from earnest care. Is it unfair to believe that there has been an entire omission of duty on the part of those, who were bound to delineate plainly to such, the true nature and purposes of the medical profession? Students, who on the contrary manifest but the single purpose of acquiring positive knowledge at almost any sacrifice, furnish the best evidence, that their early training has been directed by those fully appreciating the student's leading object and the character of a teacher's duties. It is not enough that we

furnish the library, hear the recitations, and give the clinical lessons, we are to know, and direct the motives of our students, that they shall comprehend clearly the difference between the nature of the medical profession and the mere trade. In the history of the profession of our country, never were the duties of teachers, both private and public, more urgent, nor to be exercised with more scrupulous care, than at this time. The wild spirit of speculation pervading so much all avocations, the increasing desire for the accumulation of money, believing too that it can be done rapidly, does not leave medical students exempt from its contagion. The constant demands too of the army, for recruiting its medical staff, with a corresponding desire on the part of young men to enter this branch of service, developes greatly the expedients, by which they may obtain some credential, that shall have sufficient validity to admit them hurriedly to the rank of army surgeon.

In some of these examples, they are stimulated by a commendable, patriotic and humane motive, while with others no very definite purpose is shown, beyond that of pecuniary considerations, and the idea of suddenly becoming crammed with knowledge that will grow them quickly into full sized doctors. These are all circumstances increasing the responsibilities of teachers, and should the more stimulate us to guard with an increased vigilance the portals of the profession, of which all preceptors are the authorized watchmen.

Students should be taught that a correct knowledge of the principles of medicine and surgery is more necessary if possible, in military, than in civil practice; since in the latter, the opportunities are more favorable for their further acquisition than under the circumstances, which necessarily accompany the duties of the former. We certainly cannot console ourselves very much, when we know that our students, with too meagre fitness have taken upon themselves the duties of the army surgeon, instead of those of civil practice, for while we can realize the direct and immediate consequences to be more serious, so are we fully conscious that the more remote results will be equally untoward to the general interests of medicine and surgery.

We neither assert, nor believe, that medical pupilage in our own State, is conducted with more remissness than in others, but this does not lessen in the least our own accountability as instructors. Those coming from other States to the schools of our own, to attend lectures, are to be received on the same common terms with our pupils, and doubtless their qualifications and motives do not differ materially; but, be this as it may, they have been under the more special guidance of their office instructors, and, as they are duly endorsed by the latter, the schools, as we have already shown, are obliged to accept them. With the close of the lecture term, a large majority of each

class not graduated, will return to their former preceptors, to remain with them, the only proper directors of their purposes, time and labors, until the return of the lecture term. If the views already expressed upon this subject be true, then are we not justly chargeable with what is conceded to be too low a standard of medical pupilage? While heretofore, it has been charged upon medical colleges, that their system of instruction was too imperfect, and the evils of defective medical education were exclusively attributable to this one source, does not a careful review of the facts show that at least an equal share of them are to be found lying at the very door of office instruction? In pursuing this theme, the sole object has been to keep in view the respective responsibilities of the public and private teacher, believing that both have their relative labors to perform, and that the cause of medical education will suffer as either are imperfectly done, or wholly overlooked. We are to remember that the private teacher stands at the gate-way, which opens to receive applicants for pupilage, and with him alone, is the high trust of accepting or rejecting them. Do those who teach in medical colleges exercise a less important function when they decide upon the qualifications, that shall entitle their students to the doctorate?

It does not seem to be the exclusive province of either public or private teachers to complete the work of medical education, therefore the more perfectly they harmonize in the fulfilment of their entire duties, the more successfully will the great object be attained. Is it earnestly desired to see the standard of medical scholarship rising sufficiently to give to the medical profession, its highest destiny? Then should the labors of private and public preceptors be rendered by neither exclusively, but sincerely united in accordance with their proper relative spheres. Would we see the ranks of our profession supplied with such as shall comprehend clearly the fullest extent of their mission? Then must we more rigorously discharge our duties, which have almost wholly the direction of the future weal or otherwise of our pupils. Shall it be our privilege to witness in the character of those, who come from the medical colleges, commissioned with the sacred authority of a diploma, evincing only such purposes as accord with its intended spirit? Then must there be a more thorough indoctrination into the character and purposes of the medical profession, while the mutual obligations of teacher and pupil are in their fullest force. Let us not be too severe in our criticisms upon the medical colleges for authorizing their students to practice, while we continue to send them only raw recruits. The private offices of physicians are the real fountains whence come the majority of the applicants for college instruction; then let us not forget as these are pure or otherwise, so will be the results. The history of this society like

that of every other well organized medical association, furnishes abundant proof that our profession has its associate relations and interests, and every physician has his share of such capacity, and is bound to discharge its duties. It is not therefore a mere harmless oversight on the part of those who fail to so instruct their pupils, that they shall appreciate both their individual and social relations to their calling, for both have their claims and privileges. That a more thorough cultivation of the medical sciences, and a more complete organization of the medical profession, are reciprocal in their advantages, will not be questioned. Can it be supposed, if all medical teachers had distinctly specified their requirements of pupils, and enforced them strictly, that there would have been so many counties in our State, either destitute of medical societies, or if not without such organizations, they existing only in form without sufficient vitality to give them a representation in this body? Would we increase, as well as extend the advantages of our organization, then we must include in our duties such as will enlighten those we instruct in its proper demands upon them, that they may acquire an early fondness for its fraternal benefits, and an increasing industry in further attainments. It may be urged that such obligations are more properly worthy of consideration after the duties of practitioners have been assumed. Truly are they imperative then, but it will be found in nearly every instance where these have not been incorporated into the early educational training of pupils, they will rarely be realized in after life sufficiently to afford their solid advantages. As it is the conceded right, so is it the positive duty of physicians to scrutinize closely and wisely the standard of teaching adopted in all the medical schools; while the obligation is equally binding upon them to scan carefully their own system of instruction, since it has its specific importance, and is just as much a portion of the legally required period of study, as the time spent in the attendance upon college lectures. In accordance with our accepted plan of medical education, professors in medical colleges have an equal right in all respects, to claim to its fullest extent, the same faithfulness in office or private instruction, that is exacted of them while acting in their legitimate capacity. Identified as we are, with the present eventful period in the history of this society, can we acquit ourselves honorably in accordance with the implied obligations of its membership, while we fail to aid it to our utmost, in the fullest consummation of its purpose, to elevate the standard of medical learning in this country? Can there be weightier considerations than already press upon us to infuse into the future labors of this society a spirit compatible with its most worthy objects? Its records for more than half a century may challenge the medical profession for an example of more steady, earnest

devotion to its highest interests. As we contemplate its relation to the cause of medical education, we cannot limit our view to what it has, nor what it may yet achieve within the geographical limits of our own State. Already has it diffused liberally of its own kindly, healthful spirit into kindred associations in the sister States. Some of these manifest a commendable emulation, and in some instances a most honorable competition in the promotion of the same great common objects. Known already, by its honorable position in our own National Medical Congress, so has it a fair name in other lands. Shall we, in the full exercise of all its trusts, make its future history less eventful for good, or shall it afford a still higher commentary on the worth of our toils? May I not ask its veteran members, as they shall lay off their armor, so long and so honorably worn, on whom shall it rest? Then as we love our profession, and revere the names of those whose contributions have so enriched its history, and delight in according them all honor for having matured and transmitted to us a plan so capable of protecting and promoting its purposes; let us cordially unite, preceptors in common, in the one great work of elevating our whole system of medical pupilage. Let public and private teachers be fellow laborers in this common cause. We should remember too, that since our duties are mutual, they are alike binding, and cannot be neglected, and we remain blameless.

Bound as we are, at all times, with unfaltering faith, to exercise a sleepless fidelity to our calling, never did its interests demand, with more rightful authority than now, so free sacrifices upon its altars. The events, now convulsing every portion of our beloved country, are furnishing trying tests of the purposes of the American medical profession. As in the past, so does it now meet them nobly and successfully, dispensing with unstinted measure its choicest blessings wherever needed. Its standards are in our own keeping. They should be here. We must hold and elevate them, then will this society honor itself, our State, our country, and the world.

ARTICLE II.

The Importance of examining the condition of the Dioptric Media in some affections of the Eye. By C. A. Robertson, M. D., Albany, N. Y.

"With the advances, which we make in our knowledge of physiology and pathology, we immediately, as a consequence, become stronger in our therapeutics and in our method of practice." This language, which I quote from the excellent address of the recent accomplished President of the Medical Society of Albany county, is apposite to nothing within the range of medical topics in a greater degree, than to the therapeutics of the Eye. Research and philosophy have been specially active and successful within a few years in investigating the functions and abnormal actions of this wonderful and beautiful organ. Vague conjecture as to disorders of its functions as an optical contrivance, or its diseases as a portion of the animal structure has yielded to intelligent precision of diagnosis. This is progress of the most satisfactory character, and emphatically contradicts the pratings of those, who accuse Medicine of lacking the accuracy of science, and slur the practice of its disciples, as if altogether empirical.

When a correct diagnosis is made, a great point is gained or rather *the* great point is gained. Having secured that, the sequences to an intelligent mind are a matter of course. Treatment becomes then simply the fitness of things. When a man of definite purpose sets about a thing, he first places distinctly before his understanding the exact object of his enterprise with all its surroundings, and when he fully comprehends these, he is not likely to make very gross errors in the perception and selection of the proper means for securing the end in view.

The physician sometimes arrives at an erroneous conclusion in his examination of the eye, by neglecting its optical character, and not considering how far its pathological appearance may be dependent on functional disorder. Asthenopia, or weak eyes are not necessarily caused by depraved or deficient innervation, or by exalted nervous sensibility, by active determination or passive congestion of blood, or by anæmia, either of a local or constitutional nature. The nutrition may be perfect in every respect, and yet the eyes may afford the possessor little pleasure when he attempts to use them. Such cases are constantly occurring in practice, and not unfrequently the advice and treatment the patient receives are perfectly useless, if not sometimes positively hurtful. Perhaps the conjunctival vessels are

somewhat congested, and the inevitable caustic is invoked. There may be pain in the ocular globe, or in the supra-orbital region, and then come leeches, blisters and cathartics, and not unlikely belladonna ointment shall be daubed on the brow and temple, or atropine instilled within the lids. If any intolerance of light is complained of, cimmerian darkness for a season, is the gloomy fate of the sufferer. It may be that nothing abnormal is detected in the objective appearance of the eyes, and then, of course, it is the *nerves* that are in fault,

> "———like the imperial basilisk,
> Killing ——— with unapparent wounds."

Should occasional strabismus be observed, to some the conviction would then seem settled beyond controversy, that the nervous system is responsible. Tonics and alteratives are then appealed to, but appealed to in vain. The eyes remain as before, or worse, it is observed that the recurring deviation of the optic axis grows more frequent, until finally the strabismus becomes fixed and permanent, and amenable only to surgical interference.

A correct diagnosis in these cases is very desirable and important. Even if no benefit can result from treatment, it is an intellectual satisfaction to the physician to know the condition of things, and he will also avoid the chagrin of a mistaken prognosis. To a sensible and appreciative patient a reliable although adverse opinion is of high value, for it relieves him of anxious suspense and protects him from repeated disappointment, and where pecuniary considerations are imperative, he is saved from a waste of his resources. From erroneous opinions being expressed, the result is too frequent that these cases fall into the hands of charlatans, through whose rapacity patients are without benefit deprived of their money, and through whose ignorance they are sometimes recklessly deprived of their sight.

Temporary benefit sometimes follows the treatment pursued in the cases alluded to. Congestion is relieved by depletion, belladonna operating as an anodyne allays the pain of the eye ball or the brow, and the darkened chamber affords functional rest to the eye. Still, to the annoyance of patient and physician, the trouble returns as soon as the eyes are tasked again. The round of treatment is gone through with anew, only to be followed by similar results, until doctor and sufferer are alike tired of each other.

Now in many, or rather in most such cases, an examination of the dioptric media of the eye, would discover that all inconvenience and suffering are attributable to faulty refraction, or to a failure of the focus to fall on the retina. Various conditions of the eye are responsible for these errors. If the refractive power of the dioptric

media in an eye of normal shape be excessive, the focus of rays of light entering the eye will be formed too soon, and will be in front of the retina in the vitreous humor. The same result will be produced if the globe of the eye be elongated in its antero-posterior diameter. The vision in these conditions cannot be perfect, since no defined and distinct image is pictured on the retina. A nearer approximation of the object looked at is required in order to form the picture there, and therefore it is called myopic. When the focus of visual rays is not exactly on the retina, where it should be, the patient constantly strains the accommodative power of the eye to compel the focus there, in order to secure a distinct image of objects. This habitual strain produces uneasiness when the eye is long used, and may ultimately produce congestion, and a train of serious pathological changes. This strain is relieved, when by the aid of proper glasses the focus is formed in its proper situation. Now, near-sight is a condition of the eye, familiar enough to the profession and to the public, and it is generally understood that a concave glass will rectify it, but it is not so well understood, even by the majority of the profession, that when progressive in its character, it frequently becomes a matter of most serious solicitude, since it may terminate in complete blindness. The selection of glasses is usually made by the patient, but it is unfortunately often a bad one, and the effect upon the eyes is exceedingly injurious. On this point, I quote the words of a prominent English authority, who writes, "I do not hesitate to say that the empirical, hap-hazard plan of selection employed by opticians is but too frequently attended by the worst of consequences, that eyes are often ruined, which might by skillful treatment have been preserved for years."

If the refractive power of the eye is less than normal, or the ocular globe is flattened, so that its antero-posterior diameter is too short, a condition of the eye opposite to near-sight exists, that has been termed hypermetropia. The visual rays here reach the retina before forming a focus, and of course the image is a blurred one and the vision consequently imperfect. This state of the eye has not been well understood, until within a very recent period. The elaborate researches of several European observers have elicited some facts of very great interest and importance. It has been found that this condition of the eye is very common, that a large proportion of the cases of weak eyes which apply for relief are due to it, and that, while they have obstinately resisted all medicinal treatment, they may be speedily and permanently cured by the use of properly fitted glasses. Convex lenses are required both for near and for distant objects in the treatment of hypermetropia; in this respect differing

from the requirement of old persons who need convex glasses for near objects only. In order to determine what strength of glasses a hypermetropic patient requires, it is found necessary to paralyze the accommodative power of the eye by the instillation of a strong solution of atropia. The patient has been so long accustomed to strain the adaptive power of the eye to secure its utmost refraction, that he cannot voluntarily relax the whole tension, even when a lens is furnished, that supercedes the necessity of any effort of accommodation. Hypermetropia may be latent for years, but sometimes it is so pronounced as to be troublesome at an early age.

Convergent strabismus is one of the unfortunate results of this affection. In fact it is the most common cause of the deformity. The recognition of this fact has elevated the operation for strabismus to a higher plane than that of a merely cosmetic performance. In performing the modern operation, two purposes are in view. One is to remove a deformity, and the other and greater, to restore the eyes to their normal position, so that the visual susceptibility of the retina shall not be lost in either of them through disuse of the organ. After the proper direction of the optic axes has been secured by the operation, it is advisable to guard against relapse by curing the hypermetropia.

The disorder of refraction from the affection known as astigmatism, causes exceedingly defective sight, and sometimes intolerance of light. Here the curvatures of the cornea, and it may be of the crystalline lens, are not symmetrical. For instance, the curvature in a perpendicular plane may be the arc of a different radius from that of horizontal curvature. It is clear that the foci of the different curvatures cannot then be identical, and the image formed within the eye must be distorted and confused. The object of treatment is to neutralize the effect of diversity of curvatures. The proper method by which to accomplish this, is to adapt to the eye lenses ground in such a manner as to cast the faulty focus of the eye where it will become identical with the correct focus. Such glasses are called cylindrical. If the faulty focus is anterior to the retina then the cylindrical glass should be concave in one plane, for in one plane the patient is myopic, and if the abnormal curvature tends to refract the rays to a focus behind the retina, then the glass should be convex in the plane adapted to that curvature.

These irregularities of refraction, although very generally stated here, teach conclusively the necessity of investigating the condition of the dioptric media of the eye in all cases of asthenopia, and that frequently the judicious use of properly fitted glasses will not only afford relief to the weak sight, but will banish all irritation, congestion and pain in and about the eyes.

ARTICLE III.

The Uses and Abuses of Tenotomy in cases of Muscular Atrophy, with the true indications for its Employment. By Charles Fayette Taylor, M. D., of New York.

A large proportion of the deformities of the lower extremities arise from atrophy and attendant contractions of the muscular tissue, as a result of paralysis in early life. There are some peculiarities of manifestation in this infantile paralysis, which may reasonably suggest a pathology different in many respects from that which is incident to adult life. Were it not foreign to the scope of this paper, it would be interesting to point out the reasons for believing that these peculiar effects of paralysis in early life depend on a lesion characteristically different from that which adult existence is liable to. Certain it is that we have a paralysis, followed by muscular atrophy and deformities, as a special and unfortunate inheritance of childhood. After excluding those deformities which arise from scrofulous affections of the bones and joints—such as hip-joint disease, white swelling, &c.,—whose origin is obvious, we may safely charge nearly all the remaining deformities of the lower extremities to the effects of paralysis. In this classification I do not exclude that congenital distortion with which we are all familiar—club-foot. We not only know that the child before birth is liable to various diseases, but that its nervous system is peculiarly susceptible. Talipes and strabismus are common manifestations of this susceptibility. That congenital club-foot is actually the result of an intra-uterine paralysis, is sufficiently proved by the facts that much the largest number of club-feet occur in childhood, as the usual sequence of the paralysis of dentition and intestinal irritation; and further, that there is no appreciable difference between the intra and extra-uterine deformity. Besides, other forms of paralysis do occur before birth, rendering the fact of intra-uterine paralysis indisputable. Not less than five or six cases of intra-uterine apoplexy have come under my own observation; children born with hemiplegia—total loss of power of one side, drawing of the mouth, and all the evidences of a clot in a hemisphere of the brain.

The unsightly deformity of club-foot is simply the result of the continuous action of muscular contraction on the once perfectly formed foot, till the bones—still soft and yielding—are pressed and moulded into the formless mass we see. It is the same when occurring after birth as before it. In both cases we have the same loss of muscular

power, the same wasting of the muscular tissue as evinced in the small size of the affected limb and the same contraction of the extensor muscles, accompanied with loss of irritability and power in the flexors. The question naturally arises, what causes the noticeable difference in the contractile force of different muscles of the same paralyzed limb? The paralysis originates in a lesion of the nerve-centre, the brain or spinal cord. At first the paralysis, whether partial or complete, is uniform in all parts below the point where the lesion is situated. The question recurs, why is not recovery equally uniform? Why should some muscles be the subjects of fatty degeneration and lengthening, while others, deriving their nervous supply from the same nervous trunks, are subjects of a contraction and shortening with a relative increase of irritability and force? To answer would be to give an explanation of the immediate cause of club-foot and the other deformities of the lower extremities now under consideration. In the case of the deltoid, which, in paralysis of the upper extremity, is particularly liable to atrophy and complete absorption—rendering the shoulder relaxed and useless, while the forearm and hand may attain almost perfect recovery—it has been suggested that, as that muscle derives nearly all its nervous branches from only one nerve, the circumflex, this may account for its tardy and imperfect recovery as compared with other portions of the limb which are supplied by branches from several nerves. But this hypothesis must be rejected, because we have other muscles as uniformly exhibiting the same tendency to become permanently useless—the flexors of the foot in club-foot for instance—which are abundantly supplied with nerves from several sources. When a child has been attacked with this form of paralysis, there is always a certain amount of recovery—an effort of nature to repair the damage inflicted by the shock of disease. But this reparation is not uniform; different groups of muscles exhibit different degrees of recuperative ability, and the result is, talipes and the other deformities of the lower extremities. Until there is some evidence to the contrary, it must be assumed that the re-development and re-distribution of the nervous supply, as the result of increased conducting and generating power on the part of the spinal cord, is equal and uniform to all the paralyzed muscles. But, as before stated, we have, as a matter of *fact*, very unequal degrees of recovery in the different groups of affected muscles; with lengthening of some and shortening of others, and still further variations of physical and pathological conditions. Why is this diversity of results? Rejecting, as with our present light we must, any attempt at a physiological explanation of this phenomenon, we need not go far for a cause suffi-

cient to account for all the facts of the case. And this cause seems to be *relative position.* On a moment's reflection, it will be observed that, in the case of the deltoid, this muscle is in such a situation that it must sustain the weight of the entire arm; that is, it is subjected to constant traction. Of course, while it is paralyzed, it has no power of resisting this traction, and must necessarily be stretched out. The same is the case with the flexors of the foot. The patient, in lying between the sheets, or in standing, or in whatever position he may be, has the foot extended; that is, with the flexor muscles unvaryingly stretched to the very utmost. And the same will be found to be true of the extensors of the leg, which are also peculiarly liable to degeneration; the position of the limb is such that these muscles are kept in a stretched out position till their irritability and contractility are lost. And this brings us to consider the effect of continuous or violent extension on muscular tissue. The term, "tire out the muscles," is frequently used, implying that its effect is understood. Yet, either owing to defective means for accomplishing this extension, or timidity in carrying it out, the surgical uses of the ability to destroy the contractility of a muscle, have not, as yet, accomplished such results as it would seem capable of. Dr. Wm. H. Van Buren read a paper to the New York Academy of Medicine, a few months ago, on the treatment of spasm of the sphincter ani. His method of treatment for this most distressing disease is as efficacious as it is simple and speedy. By inserting the thumbs into the anus, and placing the fingers on each haunch, he stretches the sphincter between the ischii to the fullest extent. The irritability of the muscle is destroyed on the instant, and the cure is effected. I have seen several cases of lameness and one of club-foot which were produced by a violent wrench which had paralyzed, in a moment, the muscles subjected to the unusual stretching.

There is a curious illustration of the effect of extension on the ligaments and muscles now in this city. At one of the minor theatres there is exhibiting what is called the "India-rubber man," an individual whose business it is to contort himself in the most unheard of and inconceivable manner; dislocating his joints, laying his leg up along the spinal column, and otherwise defying ordinary anatomical laws. How did he attain this remarkable flexibility of joints and relaxation of muscle? Muscles are for the purpose of holding the frame together, rather than of facilitating its separation! I have been informed that every day this man subjects himself to a continuous process of stretching. A heavy weight is tied to the foot which he holds, slowly swinging pendant in the air; the same is done to the arms and the whole body. The result is, an almost complete destruction of the tonicity of the muscles, and a corres-

ponding relaxation of all the tissues. But he is so nearly paralyzed that he can hardly walk; he is wholly incapable of a firm embrace; the spinal column can be made to reverse the natural curves, and altogether he is an illustration, on a large scale, of what must occur in a single muscle or group of muscles when accidentally or purposely subjected to uniform or violent traction. The only possible results, loss of irritability and degeneration, are sure to follow. It is obvious that the effect of extension must be greater in the paralyzed muscle than it would be in the healthy tissue, and that a slight degree of traction, which would be only normal in the healthy muscle, might be capable of destroying feeble irritability and power. The fact that extension has the power of destroying the contractility of muscles may be explained, without supposing rupture of the contracting fibre-cells, when we remember that the course of the muscular fibrilla is zig-zag, and that in contracting this eccentricity is increased, the fiber being thrown up in a succession of irregular zig-zags. In extension these eccentrics are destroyed, and the spaces closed up by the presence and pressure of other straightened-out fibers. Instead of a wavy mass, the fibers approximate straight lines, with a corresponding loss of contractility. It is, no doubt, already correctly inferred that I place much more importance on the *loss* of muscular power in certain muscles, as explained above (a loss of power, be it understood, though accidental and incidental, yet *beyond* the primary effect of the original paralysis), than on the assumed contraction of certain other muscles which is usually referred to as the cause of the deformity. For this assumed contraction and increase of irritability is as incidental to the paralysis as the relaxation; and, like the latter, depends entirely on the position in which the muscle is persistently placed. If the muscle is allowed to relax, the corrugated condition of the contractile fiber is not destroyed but increased; and hence the muscle regains an amount of irritability and contractile power as much greater than the amount of original paralysis would imply as the amount by which that of the extended muscles is diminished. Starting with the same degree of paralysis, we see how the varying results are brought about by accidental causes. Indeed, so far from the fact is it that paralysis causes certain muscles of themselves to contract (I mean that form of paralysis preceding, and causing these cases, which is characterized by a simple stoppage of the usual nervous supply, but without irritation in the nerve center), we find, as a matter of fact, that these paralyzed muscles are even less liable to shortening contraction than are healthy muscles. In cases of morbus coxarius, or any other affection in which the limb is thrown into a position where some muscles are relaxed and others extended, the muscles assume corresponding states in much less time and much

more persistently than in the case of paralysis. The treatment of the contractions attendant on and following these affections of the joints, is now a very important department of surgery. In the case of hip-joint disease, the adductors and flexors of the thigh, though least directly affected by the inflammation about the joint, are first to assume the permanent shortening, simply because the leg is thrown in a position to relax them soonest and most. And it would seem, from the well known persistence and strength of the contraction in these cases, that the sounder the muscle the more rapid and permanent the so-called contractions.

With regard to the treatment of these cases, it is obvious that the shortened muscles must be elongated. This may be done either by apparatus for producing extension, or, when that is not possible, by division of the tendons. Up to a certain point *properly* contrived apparatus *persistently* used can always be relied on as effective in producing elongation of the muscles. But in this case, as under all other circumstances, extension of a muscle produces elongation by reducing its irritability and diminishing its contractile power. A joint, after a set of muscles has been elongated by extension, is always relatively weaker than before, because now both *flexors and extensors are more nearly alike; and the principal object gained by the elongation of the shortened muscles is the same as in tenotomy, viz: *liberation of the joint* and *possibility of motion*. It should be ever borne in mind that tenotomy should not be considered the end of all treatment, a last resort after all other means have failed, and after which all effort may cease, but like elongation by extension, should be employed as the very *first* step in treatment, a means to an end. We divide the tendon for the purpose of liberating the joint previously tied down by the shortening of the muscles. If there is sufficient latent muscular power to be developed by the fact of liberation, or by the ordinary exercise of locomotion, which may occur in a case where locomotion is possible, as in many cases of talipes, then tenotomy is justifiable and proper. But even here tenotomy is only a liberation of the joint, and the redevelopment, which constitutes the process of recovery, takes place afterwards. Tenotomy is but the *first step* towards recovery. In all cases where there is not sufficient muscular power remaining to set in motion the liberated joints, unless there are special means adopted for developing the muscular power, the deformity is sure to recur, no matter what the *apparent* benefit of the operation may be, and it is an abuse of tenotomy to practice it under such

* The terms flexor and extensor are used in this paper to designate the groups of muscles which accomplish flexion and extension respectively, and hence, in the case of the foot, do not correspond to the extensors and flexors of the books.

circumstances. I have seen cases where the tendons have been divided several times, each operation, of course, attended with reduction of the distortion, and giving great hopes of permanent recovery; but the paralysis continuing, and the faulty positions not guarded against, and above all no effort made to redevelop the muscular force (where alone a cure is to be sought,) the same conditions operating produced a recurrence of the deformity as it before existed. So often do these disappointments occur that careful surgeons often refuse to operate in cases where recovery would seem to be assured. Take that most numerous class, club-foot, and observe how often tenotomy fails to afford that permanent relief which at first seemed to be already attained; not because the operation was not well and skilfully done, but because that this, which should have been the beginning or first step of treatment, was suffered to be the last and only thing done—the paralysis of the muscles, which is the real disease, having been suffered to continue as before. A single case will illustrate the importance of this subject.

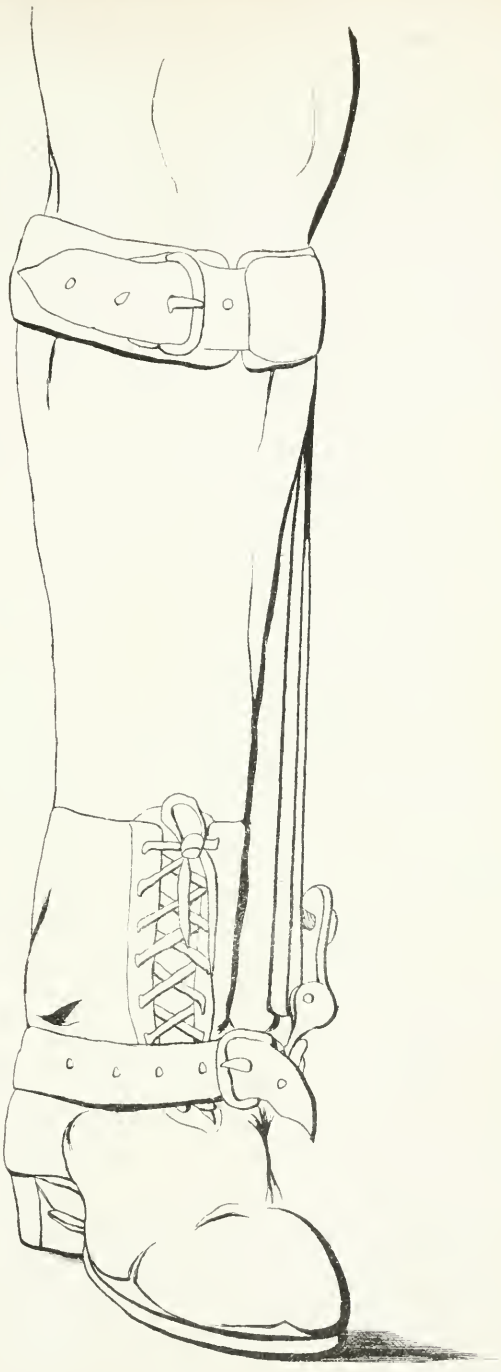
At the meeting of the N. Y. State Medical Society for 1863, Dr. Enos read a very interesting paper on the employment of plaster of Paris as a dressing after operation for club-foot, and related a case where it was successfully tried. The whole process was skilfully done, and resulted in almost perfect restoration of the foot. But before the history of the cure appeared in the Society's Transactions, the case was brought to me in precisely the same condition as he was before Dr. Enos saw him, having walked on the side or rather top of his foot so long that an abscess had been formed between the skin and the tarsal bones nearly as large as half a hen's egg. In this case, as in all others, the real disease is the paralysis, and the deformity, whatever that may be, arises from that cause; and until the paralysis is removed, or sufficiently improved to allow of symmetrical motion, tenotomy can be of no avail in effecting permanent relief. The paralysis may be diminished from several causes. There may have been an increase of innervation in the parts after the lengthening and shortening of the muscles was begun, which may be considered as a latent force to be made available when motion is allowed by dividing the tendon. Hence a certain amount of spontaneous recovery after tenotomy. Or, there may be sufficient muscular power to be of immediate use on liberation of motion. But the majority of cases require (and are incurable without) the employment of special means beyond the patient's own unaided efforts.

Among the first in importance is the use of artificial heat to the atrophied muscles; not simply to impart a genial, natural-warmth, where warmth is always below the normal degree, but as high a heat as can be borne, continued and persisted in for months. Its

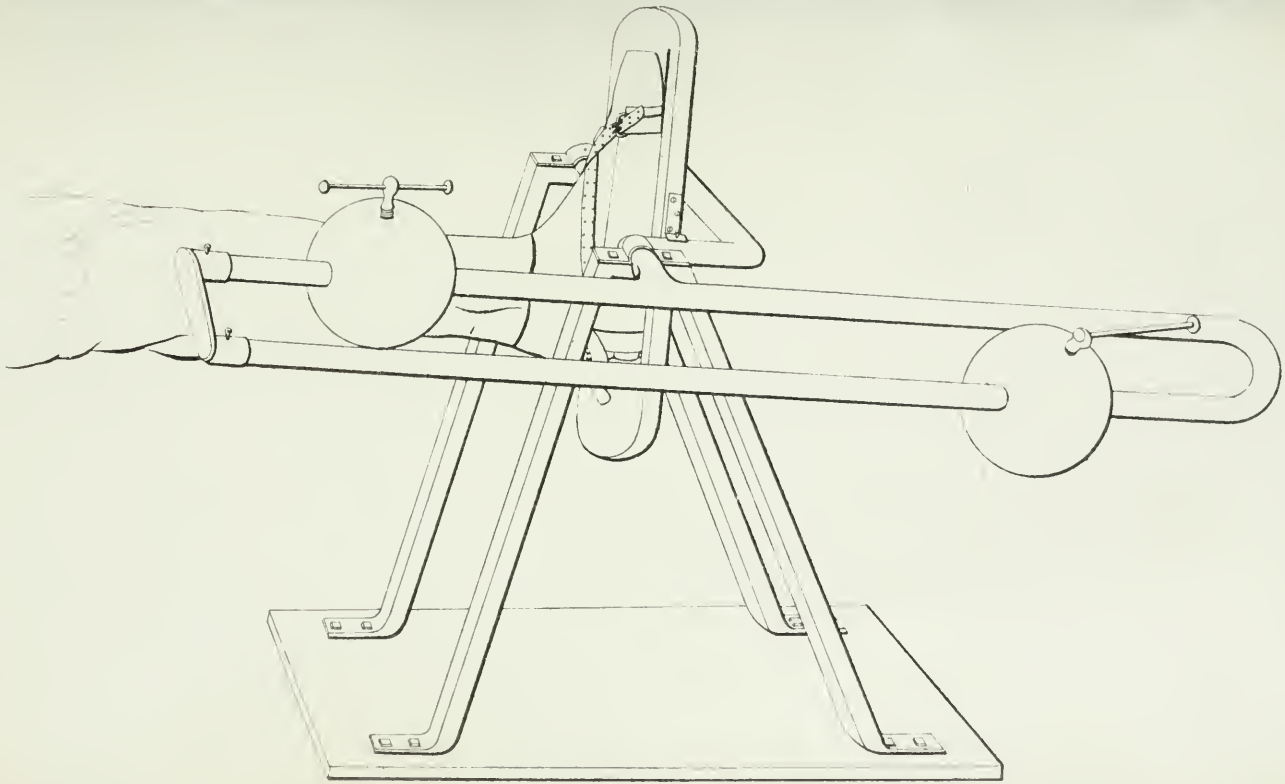
effects are stimulating and highly tonic upon the insusceptible tissues. This high heat, which is better dry than when imparted by means of baths, opens the capillary vessels and induces a circulation much better than can be obtained by any other means, and will of itself cause an increase of muscular nutrition and tissue. It also prepares the way for the special exercises by which alone a large proportion of these cases can be permanently benefited. These special exercises for redeveloping the paralyzed muscles, after tenotomy or extension has liberated the motions, must necessarily be as varied as the conditions of these cases are various. It is not my purpose to enter into the treatment of these cases further than to illustrate the uses of tenotomy as indicated in the title to this paper. As suggestions merely of what may be done in this direction by any one who is disposed to devote time and thought to this subject, I have accompanied this exposition with illustrations of several apparatuses which are found useful in the treatment of these cases. I would call particular attention to the apparatus with a *lateral* adjustable stop joint—the only one in use so far as I am aware—for regulating the position of the foot and completely protecting it from turning on the side in walking while the muscles are being developed. I would say further that there is scarcely a limb so badly paralyzed and atrophied that it has not remaining some little force, and it is by nicely adjusted apparatus that this minute power may be made manifest and increased until it becomes efficient for the purpose of locomotion.

Fig. I.

Talipes varus, first stages. Paralysis and lengthening of flexor causing shortening and strengthening of extensor muscles.



Ankle-brace with lateral action-lateral adjustable stop-joint-correcting talipes varus or valgus.

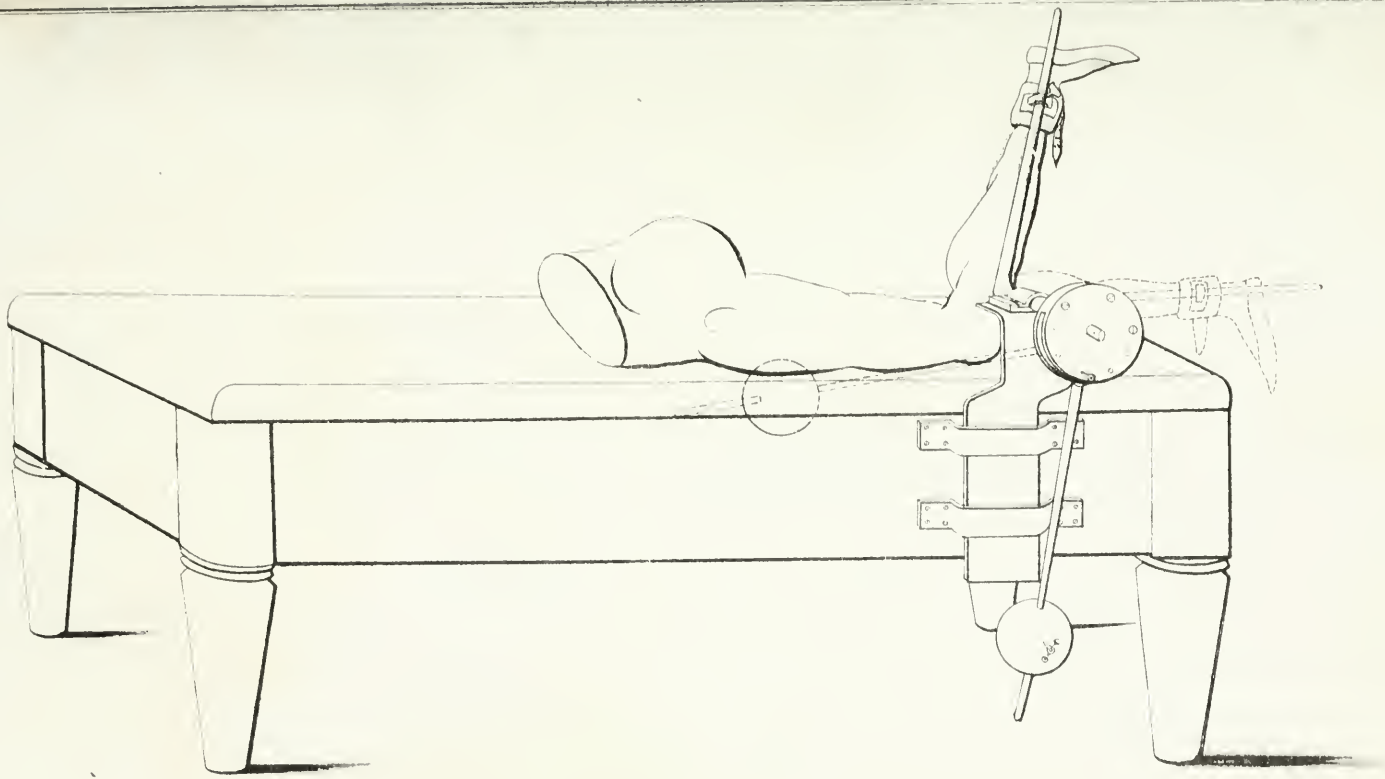


Apparatus for ascertaining minute amount of muscular contractility in flexors or extensors of foot and for developing the same.

Fig 3

Fig 4.

Apparatus for developing the flexors or extensors of the leg.



Apparatus for developing extensors of the leg and to antagonize shortening of flexors.

Fig. 2.

Apparatus for developing power of extension of whole leg walking motion.

Fig. 6.

ARTICLE IV.

The Census of New York, to be taken during the present year, considered in its Medical relations. By Franklin B. Hough, M. D., Superintendent of the Census.

The State Constitution requires that a census shall be taken during the present year, for the purpose of equalizing the representation of the several counties in the Legislature.

Having been employed by the Hon. Chauncey M. Depew, the present Secretary of State, to arrange the details of this labor, aided by the experience acquired on a similar work in 1855, I am able to present for your consideration such of the features of the coming census as possess interest to the medical profession.

You are aware that, as now taken, the names and details concerning each person, of whatever age, are separately entered on the census blank. These details include the age, sex, color, place of birth, civil condition, employment; whether a voter, alien, or colored person not taxed; whether owner of land; whether over twenty-one, and unable to read or write; and, whether deaf and dumb, blind, insane or idiotic.

These inquiries, in connection with the statistics of deaths, will afford the data for constructing a table of the probabilities of life by single years, should it be desirable. The ages of children under five years, will be reported by months, thus presenting the means for ascertaining the numbers, and their sex, born during each month since the beginning of the war. The theories of statisticians, as to the influence of great political and national events, in determining the prevailing sex of children born, will thus be readily brought to the test of truth.

The statistics of the deaf and dumb, blind, insane and idiotic, upon which so much of interest to the medical profession depends, will be much more extended than in any former census, including in addition to the details already noticed, inquiries as to the cause, duration, hereditary influences, treatment in a special institution and its results; dependence for support, whether upon private, partly private or public means; whether able to earn a living wholly or partially; and whether supported in an alms house; with ample space for remarks concerning any feature of peculiar interest that the case may present. There is no item in these inquiries that cannot be learned or observed in the family, with great facility by the enumerator, and the total results throughout the State will present an amount of

information concerning these unfortunates, that will tend to an adequate understanding of their condition and wants, so necessary to be known in providing intelligently for their relief.

Additional inquiries will be made, concerning those now in the military or naval service of the United States; including the time, place and term of first enlistment, the promotions, transfers and re-enlistment, and present rank and regiment.

If formerly in the service, (since April, 1861,) in addition to the facts above stated, his present condition will become the subject of record, as: "Health good;" "health permanently impaired;" with the loss of fingers, hands, arms, feet or legs, (designating by "R" or "L," for right or left,) number of wounds, or without wounds, and an ample space for remarks.

The census takes notice of deaths happening within the last year, and the returns will admit of the same classification as in 1855. The most approved nomenclature of diseases will be employed, and every fact of interest in connection with age, sex, nationality and occupation, will be shown. The schedules differ in no respect from those of 1855, with the exception that the name of the deceased will be entered, thus securing for at least one year in ten a thorough registration of deaths. It is a standing reproach to our State, that it has so long neglected to establish a practical and applicable system for the regular registration of births, marriages and deaths. It can only be hoped that the benefits of the custom may be so brought to the favorable notice of the public, through the census, that its adoption will follow.

But there is a modification of the inquiries concerning deaths, contemplated in the coming census, to which I wish to call your particular attention, in the hope of being able to derive benefit from your suggestions, now while the blanks are still in the printer's hands, and susceptible of modification before printing.

It is confidently believed, that when this census comes to be taken in June next, the war will have been substantially ended. At least we may hope that the rebellion will have been so nearly terminated that there will be no more slaughter, and that the casualties remaining for record will be only those incident to garrison and camp life.

It is therefore proposed to extend the inquiries made in families concerning deaths, to include all those who have died in the army or navy, or after leaving the army or navy, from diseases or wounds acquired in the service of the United States, since the beginning of the war in April, 1861.

It is true this will not cover the entire losses which this State has sustained by the war, since many have enlisted in our regiments, and have been credited on our quotas, who had no regular homes, and

therefore will have none to answer for them the facts concerning their deaths. Thousands of men have crossed the northern border, or have come from other States, or foreign countries, to enlist in this State, where they had never gained a residence, and never intended to become citizens. But to the extent that this war has made its inroads upon the domestic circle, or has deprived our State of fixed and regular members of our population, we have in the census, the means for knowing, a great amount of detail concerning the casualties of the present war, that will be of inestimable interest, now, and of great historical value hereafter.

The blanks concerning deaths in the service, or in consequence of the service, extend across two broad pages, and embrace the name, age, civil condition, whether citizen or alien, time of enlistment, regiment, original rank, regiment and rank at time of death, in what capacity he entered the service, (as volunteer, drafted, substitute, &c.,) promotions, time and place of death, whether after leaving the service, or as a prisoner of war; whether killed in battle, or by accident, or whether death occurred from wounds received in battle or by accident, or from disease acquired from service, or from disease not acquired in service; whether the body was sent home for burial, and the place where it is interred. Concerning the surviving friends, the blanks enquire whether he left a widow, parents dependent, (F. M. or 2,) parents not dependent, (F. M. or 2,) number of minor children; left no children,—dependent sisters,—left none dependent, and unknown. An ample space for remarks completes the inquiries.

Most of these questions can be answered by a stroke of the pen, in the proper column, and the facts are all generally known in the families to which the deceased belonged.

These are the only features of the census that claim your professional notice, and the plan is still open for amendment, where found desirable.

The greatest difficulty anticipated from the coming census, is from suspicions on the part of ignorant persons that it may have some connection with an enrollment for the draft, or an assessment for purposes of taxation.

Inasmuch as the census, is ordered by the State Constitution, and is provided for by a State law,—it may be said, in all sincerity, to have no relation whatever to these or any other measures that should excite distrust. I would therefore appeal to you, as each has opportunities in the daily intercourse of life,—to remove any suspicions of this kind that you may hear expressed, and to aid the cause of science, by endeavoring to render the returns impartial, full, and reliable.

ARTICLE V.

Phlegmonoid Erysipelas. By Chas. C. F. Gay, M. D., Buffalo, N. Y.

The unusual prevalence of abscess, the tendency to the formation of purulent deposits and the large number of cases of cutaneous and cellulo-cutaneous forms of erysipelas which have occurred in the city during the past season, especially during the spring months, have caused the minds of the profession to be drawn toward the consideration of that form of erysipelas which culminates in abscess, and which is the subject of this paper. Indeed, so great has been the proclivity to this form of disease and so frequent the mortality from pyaemia after surgical operations, that, in one of our hospitals, at least, operations were for a time interdicted, death after the operations serving as the rule, and recovery the exception, despite the utmost skill and precaution on the part of the surgeon.

The writer has witnessed in several instances a considerable abscess result from puncture made with the hypodermic syringe, but at the time attributed the formation of the abscess more to the preparation of morphia used, than to the puncture made with the syringe. It is well understood that the acetate instead of the sulphate of morphia, should be used in hypodermic medication, the sulphuric acid of the sulphate being capable of exciting inflammation when injected into the areola tissue. Yet I am still in doubt, whether the abscesses in question were, or were not, caused by the preparation of morphia used, or indeed, whether the puncture itself was not sufficient to have caused them.

I have a case in point, which, so far as it goes, impairs the hypothesis just alluded to. In order to determine the nature of a swelling, a very small exploring trocar was introduced, which in two or three days was followed by inflammation and suppuration, the pus being independent of and superficial to the tumor, and no acid being upon or within the instrument. I have thought it would not be wholly without interest and profit to the society to bring the subject of abscess before it at this time, particularly that form of abscess which is not unfrequently met with and which is modified and characterized by an erysipelatous dyscrasia, detailing a few representative or typical cases and indicating the best method of treatment to be adopted. But before I come to the cases I will premise, by calling attention to the fact that little has been written or published, either in our current medical literature or standard works upon that form

or species of erysipelas, viz: phlegmonous erysipelas, which is next akin to the form of disease under consideration. Perhaps the subject matter demands no more notice at the hands of the profession.

Miller's surgery contains four pages upon the subject of phlegmonous erysipelas and its treatment. Gross and Druitt have each but a single paragraph. No author has yet to my knowledge published so much as a paragraph upon the subject of phlegmonoid erysipelas, a disease certainly as well defined in all its characteristics as any other, and, pathologically considered, as much unlike phlegmonous as the latter is unlike cutaneous erysipelas. It would appear, therefore, that a surgical hiatus exists, to fill up which, some writer might profitably occupy his time.

Case First.

Mrs. H., aged 30 years, previous health good, had an attack of rigors followed with pain located near and posterior to the right breast, after the lapse of two weeks, although the pain had been continuous, there was no perceptible swelling or fluctuation, but the whole side was somewhat fuller than its opposite.

For local treatment, poultices and blisters had been used, and the patient sustained by good nourishment and tonics.

The general symptoms at this time, to-wit: extreme prostration, frequent pulse and profuse perspiration, conjoined to the local symptoms furnished sufficient evidence of the existence of pus, and the propriety of giving exit to it; consequently on February 13th a deep incision was made directly over the seat of pain, and the grooved director pushed down through in an oblique direction nearly its entire length before the walls of the abscess were penetrated, the opening thus made was dilated and one pint or more of pus obtained. A tent was introduced to the bottom of the wound and renewed every day for a week, when the discharge ceased and the patient pronounced convalescent in four weeks from the attack.

Case Second.

Mr. H., aged 33 years, husband of the former was taken sick about one week before the convalescence of his wife. Had severe rigor followed by pain in nearly the same locality upon right chest. The general and local symptoms not much unlike those of the other case. The opening of the abscess was not made so early, the prostration was greater, and symptoms more imminent.

March 19th, three weeks after the attack a deep opening was made down through the entire thoracic muscles, and one pint of pus discharged; kept wound open with the tent.

April 10th, not much improvement. Made another incision and obtained one-half pint of very offensive pus. 15th, decidedly im-

proved, and in a few days was convalescent. Duration of sickness, seven weeks.

Case Third.

Mr. P., aged 38 years. Was called to this patient Feb. 23. He complained only of sore throat; on examination found pharyngitis, made application of sol. argt. nitras. The inflammation seemed to be aggravated after each application. I consequently desisted from making any further application except a solution of morphia.

The case gradually grew worse until deglutition became extremely painful and difficult. The inflammation assumed a migratory character, beginning with the pharynx, which soon presented a healthful appearance, traveling downwards to the larynx remaining for a time, leaving it, in its turn, with a healthy aspect so far as I was able to ascertain. Yet, with the improvement of the mucous membrane, deglutition was becoming more, and still more painful. I was therefore led to attribute the pain to the action of the muscles of deglutition. Tenderness, upon pressure, was now apparent at the left of larynx; considerable fullness over the entire left side of the neck. Poultices and blisters were used, but nothing gave relief but full doses of morphia.

March 7th.—Made an incision at the left and by the side of the larynx as deep as I deemed it safe to go; then with the grooved director penetrated the walls of the abscess, dilated the opening thus made, and obtained a large quantity of pus.

March 11th.—Discharge ceased; made another opening and again obtained a gill or more of pus; used the tent.

March 14th.—Discharge entirely ceased, and in a few days the patient was convalescent. Duration of sickness, three weeks.

I have witnessed during the past season a few other cases of the same character precisely, two of which occurred in the persons of husband and wife; the abscesses locating respectively beneath the right pectoral muscle and the deep fascia of the thigh, but as they can contribute nothing toward furthering the object of this paper they are omitted.

If this affection manifests itself more often in one locality than another, that locality is the chest; still, I have seen it beneath the gastrocnemius and the fascia of the inferior serratus muscles. The assault of this disease upon two members of the same family consecutively, would most naturally suggest the question of contagion. I cannot, however, in any sense regard the disease as contagious, unless there be real contact with an abraded surface. I must rest satisfied, therefore, in the belief that the presence of the same sanitary and hygienic conditions, as bad air, food, blood, etc., which incited to the disease in the one case would, when superadded to excessive anxi-

ety and interrupted sleep, predispose to and develop in him who continuously watches by the bedside of the sick companion, the same form of disease. I have taken the liberty of calling these reported cases of disease Phlegmonoid Erysipelas.

They might be thought to be nothing more than simple abscesses, but they differ materially from simple and pure abscess. All the conditions of simple abscess were absent except one, viz., the formation of pus. Added to the negative evidence of the erysipelatous character of these abscesses, there is the positive evidence existing in the fact of the prevalence of erysipelas, that during the progress of case No. 3 there was a case of cutaneous erysipelas in the same family, the sudden onset of pain, the rigorous and active febrile movement, the deep seated inflammation, its duration and the unmistakable tendency to blood poison, all contribute to render the differential diagnosis easy.

Treatment.—The indications of treatment are plain, to wit., relief of pain and the exit of pus. To this end anodynes, poultices, blisters, wet and dry cupping, and the knife are required. It is somewhat questionable whether anything can be of much service but the employment of anodynes and the knife.

I desire to indicate what I conceive to be a therapeutical fallacy in the treatment of this affection. It is the use of discutients and sorbefacients, with the hope of repelling the inflammation or promoting resolution or absorption. These desirable results cannot be accomplished. Much time may be needlessly wasted in attempts to this end, and the life of the patient imperilled. I cannot, in language sufficiently emphatic, denounce the use of iodine, yet how naturally it suggests itself, and how eagerly is it seized upon as the infallible agent. I believe that theory, practice and common sense all combine in condemning it.

An effort should unquestionably be made to invite pus to the surface, and the employment of suitable constitutional remedies be had recourse to, to keep the pus from the blood. But the knife should be chiefly relied upon, and used as early as possible, never waiting to detect fluctuation, for by too much delay one deep abscess may degenerate into many fresh pus depots, occupying parts remote from the original or primary abscess; or pus may be absorbed into the blood, ending the case in pyemia and death. If pus can be obtained early and abundantly, it becomes impossible for the patient to die of this disease if he be properly sustained.

ARTICLE VI.

Extracts from letters received from Henry S. West, M. D., Physician to the American Board for Foreign Missions, at Sivas, Syria.

[Communicated by Dr. J. G. Orton, from Committee on Correspondence for the Sixth District.]

"Sivas, the ancient Sebastia, is situated in a basin of land upon the river Halys. Its elevation is about 5,000 feet above the Black sea; though in the latitude of Washington, the climate is temperate, and the winters, as to length, severity and amount of snow, very similar to Southern New York. From the 1st of June until the last of September there is little if any rain; the air is clear, the heat moderate, even at noonday, and the nights are always cool. The variations of both thermometer and barometer are very little from day to day during all this period. The heat is never oppressive in the shade; frequent rains occur in fall and spring.

"It is a limestone region, plains, surrounding mountains and the cliffs; there are inexhaustible stores of gypsum and carbonate of lime on every hand. The city and suburbs are abundantly supplied with water brought from the neighboring heights, which is used for irrigation, and is conducted into the courts of all the houses; the supply for drinking is also brought in the same way; the water is, of course, strongly impregnated with lime."

Surgical Operations.

"*Lithotomy.*—Soon after my arrival in this coun'ry I found that stone in the bladder was of frequent occurrence, especially among children. A Koord, who goes about the country operating for this difficulty, has been in the habit of visiting Sivas yearly. His apparatus consists of a big jack knife, and his mode of operating after the manner of surgeons of ancient days. With the finger of one hand in the rectum and the other pressing over the hypogastrium, he grasps the stone and forces it down into the perineum, where feeling it presenting, he cuts down upon it and removes it with his hand. The majority of children upon whom he operates recover; the majority of adults die. He has operated hundreds of times. Many cases of urinary fistula have fallen into my hands after his departure.

"During the five years of my residence in this country I have operated forty-three times, seven cases proved fatal, one from acute bronchitis several days after the operation, There are many persons afflicted with this disease who, from inability, fear or ignorance, do

not submit to the operation, but die a lingering and most distressing death; while others only submit to it at the last moment, when, of course, their chances of recovery are very slight.

"I have generally selected the usual lateral operation, and have given chloroform, chloric ether or sulphuric ether with good effect. The calculi which I have removed have varied in size from five ounces down to a drachm, and have consisted of the oxalate of lime, lithates, phosphates, &c. The largest number I have removed at any single operation has been twelve calculi, and this was in the case of a boy eight years of age; he recovered. I am frequently called upon to remove calculi from the urethra, both of the male and female.

"*Strangulated Hernia.*—I have been called upon to operate for this difficulty quite frequently, and will relate one or two cases of some interest. I was asked to visit a woman, aged sixty, and found her with a strangulated hernia of six days duration. The abdomen was exceedingly tense and tympanitic, and there was evidently peritonitis; there was fecal vomiting, &c. I had but little hopes from an operation; tried the taxis, but found it of no avail. I then proceeded to operate. On coming down upon the intestine I found it dark and almost gangrenous; on relieving the stricture some circulation was still manifest in the coats of the intestine. I accordingly returned it and dressed the wound; kept the patient on calomel and opium for twenty-four hours after the operation. On giving an enema, a fecal evacuation began from the anus and continued copiously for several days; ten days after the operation fæces began to appear in the wound, which had been sloughy and had not healed; fœcal discharges continued from the wound for several weeks, gradually diminishing, and after a time entirely ceased, the wound healed and the patient recovered.

"Another operation for strangulated inguinal hernia of about 36 hours duration, occurred in the person of an American priest, aged 60. I first tried the taxis thoroughly. I then operated, the intestine, which was apparently a fold of the ilium having the mesentery attached, was filled with flatus and much distended; even on dividing the stricture freely at the neck of the sack, the intestine would not pass. I drew down a portion from above, then gently endeavored to press out the flatus with my hand, and reduce it. In doing so the intestine ruptured to the extent of an inch or more in my hand. The coats appeared to be softened although not gangrenous. I introduced my fingers into the intestine, and withdrew a large dead worm. I then sewed up the wound of the intestine, (glover's suture,) divided the stricture still more freely, and returned the bowel. I kept the patient under the influence of opium for three days, when I ventured

to open the bowels with a mild dose of oil. The wound was somewhat sloughy for a time, but eventually healed well, and the patient had a good recovery."

"*Amputations* both major and minor occasionally occur, but operations for the *extirpation of the testicle* for various diseases, are quite common; also for *club-foot*, *hemorrhoids*, *fistula in ano* and *cancer of the lip*."

MEDICAL PRACTICE.

"*Fevers.*—The principal prevailing fevers have been *typhus* and *relapsing*. The former I have seen quite constantly since I came to Turkey. It is almost always to be found here; but for the last two years, and more especially for the past year, it has prevailed as an epidemic in many of the principalities and villages of Asia Minor. The large majority of cases are left to nature, and the percentage of recoveries will not fall much below the percentage of recoveries from the same disease in America. In fact some epidemics of ship fever among the emigrants there, have been more fatal than the ordinary epidemics here. It has proved most fatal the past year in this country among the emigrating Circassians, who have perished by tens of thousands in the cities of the seabord and interior, and whose unburied bodies have spread and aggravated the pestilence. A loss of speech frequently follows as a sequela of this fever.

"*Relapsing fever* is the main prevailing fever of this region for a year and a half past. During the winter of 1864, it seemed to rage side by side with typhus, but most of the remaining time within the period stated, as an epidemic, it has held the field principally to itself. Few cases prove fatal, and these are generally the old and infirm. Sometimes, however, it cuts down the vigorous and that within three or four days. I have known it to be fatal within two days.

"It is a disease undoubtedly arising from a specific cause, attended by rigors and chilliness, headache, vomiting, white tongue, epigastric tenderness, confined bowels, high-colored urine, frequent pulse, hot skin, and terminating in apparent convalescence in from five to eight days. In a week a relapse takes place, or a repetition of the symptoms present during the primary attack. As to treatment, I have tried quinine after a first attack to prevent a relapse, and I think it of service, but have not made sufficient observation on this point to claim that it is an important remedy. I have frequently had occasion to plug the posterior nares for excessive hemorrhage at the crisis of this disease.

"*Typhoid fever* is very little known in this region. Of the *exanthemata*, *measles* has been the most prevalent as an epidemic for two

years past, and has extended over a large part of the interior of Asia Minor, having invaded also Constantinople and other cities of the seaboard. In some places it has proved very fatal. For a few weeks last summer, in Sivas, it carried off many hundreds of children, during a cool time in the weather, taking the form sometimes described as black measles, and proving fatal within three or four days, in many instances from internal congestions, especially of the lungs, sometimes of the bowels, with severe and uncontrollable dysentery ensuing. Its sequelae also proved very troublesome; diarrhœa, dysentery, scrofula, &c., carried off many afterwards, who survived the first attack. I saw some twelve or more cases of cancrum oris following it. Some of these cases recovered under tonics and chlorate of potassa internally, and nitric acid locally."

"*Scarlatina* has prevailed as an epidemic three times during the past five years. I see more of the malignant type, and of the subsequent albuminuria than I used to see in proportion to the number of cases, when in America. There are reasons enough in the greater exposures and poverty of the people here."

"*Variola* like typhus fever is always more or less prevalent, but sometimes seems quite epidemic. For cases of this disease a physician is never called, but most of the cases recover except in bad epidemics. Vaccination has only been introduced some ten years in this region of Asia Minor. At first the Turkish population were prejudiced against it, as interfering with their doctrine of fatalism, but it has now become pretty well established, and Turks and others are being vaccinated by medical men sent out for that purpose by the government. So I presume the Turks will consider vaccination as among the things which are fated for this country."

"*Skin diseases* are found here in all their various forms, from elephantiasis, of which I have seen a few cases, to scabies, of which I have seen thousands. The most prevalent is porrigo. It is exceedingly common. Some cases are quite intractable. I have had the best success with iodide of sulphur and red precipitate ointment. There are also other skin diseases which have not found their way into the standard books on those subjects, or into any other medical production which I have seen. One of these is called the *Aleppo Button*. It prevails in Aleppo and many of the principal cities to the east of it; Diarbekin, Mosul, Aintab, &c. I saw many cases in Kharpoot. It begins with a simple pimple, small at first, which runs into quite an extensive ulcer, sometimes as large as a Spanish dollar, and this continues open generally, about one year, and then gradually and spontaneously heals. The natives call it the year sore. It usually leaves a scar for life. Few people escape it in cities where it is found, and many from abroad get it who spend much time in these places. I

have known it when occurring near the eye to result in the destruction of that organ. I never have endeavored to medicate for it, as the natives say that if it is healed, some mischief generally follows internally, and I do not think it is susceptible to treatment. The cause of this strange disease must be atmospheric, as experiments have been tried of drinking rain water instead of the usual drinking water of those places, by those who hoped thus to escape the disease which they attributed to the water, but such a course proved of no avail."

"There is also another form of skin disease deserving mention, which is regarded by the people and native physicians as genuine *leprosy*, and which the latter are afraid to touch. I tried to get it under the head of Wilson's *syphilo-derma tuberculosum*, but it will not come under that head or any other in Wilson's book on diseases of the skin. In many particulars it resembles syphilis. The eruption is most common upon the face, frequently, however, upon the limbs, and seldom upon the trunk. It is tubercular in its character, sometimes takes a form resembling small warts. But it always (as far as I have seen) invades also the fauces and palatal arch and velum. The internal eruption is of the same character, and there is some reason from aphonia and other symptoms to suspect that it invades the larynx.

"The natives regard it as incurable. It is progressive; in its later stages accompanied by serous infiltration of the cellular tissue, and usually the system becomes after a time, so poisoned as to destroy all the healthy functions, and destroy the patient. I have not had sufficient opportunities of treating it to arrive at a decided conclusion as to proper measures. I have tried all the powerful alteratives as mercury, arsenic, and iodide of potassium, but with no special results."

"*Syphilis*, (especially the secondary and tertiary forms,) is constantly seen in this region, but very seldom do I see the primary chancre. The cases all recover under iodide of mercury and iodide of potassium. Making the usual allowance for lies, I have convincing proof in many cases that no primary chancre occurred. I can only suppose that it is hereditary. In many cases it must be so, as I see it in young girls and boys before the age of puberty, who did not have infantile syphilis. I can give abundance of proof of the correctness of this statement."

MEDICAL PROFESSION.

"The number of well educated physicians in Turkey is very few. In Constantinople there are a few who take deservedly a high position; they are mostly Franks. The best physicians have usually received their education in England, France or America. In most of the larger cities of the interior, there are Frank physicians, generally possessing only a moderate amount of medical education. There are also some Turkish army physicians, graduates of the Turk-

ish medical school, in Constantinople, an inferior establishment, although its professors are Franks, and lectures are given in French. Besides these, there are in every city, American practitioners, and sometimes Greeks, who inherit their trade from their fathers. These are uneducated men, but as the son of the mechanic is trained in the use of tools, so these men are trained by their fathers to ply the pestle and mortar, bleed, blister, &c. They generally have in their possession some old Italian book on Materia Medica, and read a few names of medicines and diseases, which they flourish off before the people. They have also a pretty good stock of drugs, which they get from Constantinople. Many get a good living, and some become quite wealthy. These men when I first came to this country were generally bleeding for every thing, from consumption and typhus fever, to the most trivial complaint. This, with purging and puking was their principal routine, together with a starvation diet in all classes of cases. A great change is now perceptible in their practice in this respect, as the people as well as themselves have seen the improved results of better treatment."

"Since I located here, I have given medical instruction almost daily to a class of young American physicians, most of whom were already in practice with their fathers, or by themselves. I have given them about an hour a day oral instruction, going over a summary course in all the various branches taught in our medical schools, besides a great amount of clinical instruction. This course has occupied about four years. A great draw back which we have here is the want of opportunities for dissection. A post-mortem examination is entirely out of the question in this country. We have, however, made some hasty dissections. These young men are for the greater part making good practitioners.

"There has been a great change in public sentiment in this community in regard to the practice of medicine. The majority have learned to apply to medical science in time of need, rather than to ignorant charlatans, or to the incantations or senseless charms of priests. All classes have expressed their gratitude for the success of my efforts, which have been hindered by much prejudice and ignorance and the strategy of native physicians. Lately the Turkish government are endeavoring to improve medical practice, by legislation. I dont know what success they will have; perhaps better in this arbitrary government than we should in our republic. The Porte has issued an order forbidding all physicians who have no regular diploma, to practice. I have within a few days been requested by the Pasha, to examine the various practitioners of this place, and give to such as could pass a satisfactory examination, a proper testimonial to that effect, all others being ordered to close up their business."

ARTICLE VII.

Observations on Cerebro Spinal Meningitis, or Spotted Fever, as it prevailed at Carbondale, Pa., in the Winter and Spring of 1864. By Charles Burr, M. D., of Carbondale, Pa.

[Communicated by Geo. Burr, M. D., of Binghamton, N. Y.]

This disease first made its appearance in Carbondale the fore-part of December, 1863, on Dundaff street, among our Irish mining population, and for two or three weeks was confined mainly to them, and to that particular locality. But at length it spread to other parts of the town, and among all classes of our citizens. No station in life was apparently exempt; the high and the low, the rich and the poor, alike shared in the infliction, until out of a population of about 6,000 souls, over 400 deaths occurred, principally among children and very young persons. Of the comparatively few adults attacked with the disease, the larger portion were women. The greatest number of cases that occurred in any one month, was in January. As spring opened, and warm weather approached, the cases rapidly diminished in number, until the disease became so near extinct as to cease to attract notice outside of the profession. Sporadic cases, however, occurred all summer, and have continued, occasionally here and there one, even up to the present time of writing, December 20, 1864. But there are no indications as yet that it will prevail again as an epidemic. The cases that have occurred since last spring have assumed a milder and more tractable form. A larger proportion of them have recovered.

Symptoms.—Before I speak of the symptoms of this epidemic, I would premise, that Proteus himself could not have assumed more forms than did this fell destroyer; yet after a little experience, the lurking devil could generally be detected without difficulty. No matter what garb he assumed at first, the cloven foot was very soon too plainly to be seen.

The disease was commonly ushered in by more or less of a chill. Very frequently pains in some part of the body, as the neck, shoulder, arm, or more distant extremities, were precursors of an attack. After the chill, great heat of the skin was generally present, with frequent or rapid pulse. Nausea and vomiting were very common symptoms at the commencement of this disease. Frequently the stomach was extremely irritable, ejecting everything taken into it, thus forming a formidable obstacle to the use of medicine. The

appearance of the tongue was generally but little changed. As the disease progressed, it would sometimes be covered with a white coating, with that exception it was nearly normal.

Sometimes the patient would be taken down quite suddenly, soon fall into a comatose condition, which would rapidly increase in intensity, stertorous breathing come on, and in a few brief hours, the scene would be closed in death. In more protracted cases, the cerebral symptoms were not, at least at first, as well marked. Sometimes they were almost wholly absent. Frequently, when called to a patient, he would be found with a hot skin, frequent pulse, great nervous excitement, and an expression of intense anxiety and suffering on the countenance. Ask him if he had pain, the answer would be "No, but I am *so* sick! I am *so* sick!"

The cerebral symptoms in these cases would generally soon develop themselves in some form. Sometimes there was violent delirium and great mental excitement, requiring constant watching of the patient to keep him on the bed; and these would alternate with one or more calm and lucid intervals, before the potent anodyne of death put a final quietus to the patient's sufferings; or, in more rare cases, an amelioration of the symptoms occurred, and a slow convalescence ended in his ultimate recovery.

At other times the patient would be more inclined to coma. After an apparent sleep for a few minutes, he would suddenly arouse with a peculiar cry of anguish, clap his hands to his head and exclaim, "Oh! my head! my head!" and twist and writhe in every possible form, without cessation or intermission, until completely exhausted. He would then sink again into a stupor, to arouse after a longer or shorter interval, only to exhibit the same degree of intense anguish and extreme restlessness as before, until exhausted nature could endure no longer, and death would kindly come to the patient's relief.

Sometimes convulsions would occur. At other times there was tetanic rigidity of the muscles, principally of the back and neck. This symptom was quite common. Sometimes the head would be drawn backwards (opisthotonos); in other cases the head would be fixed to one side. In instances where I noticed this latter peculiarity, it was to the left side. This coincidence, however, was probably merely accidental.

But I cannot attempt to describe fully the ever-changing and varying symptoms of this terrible disease! To do so would require a record of each day's symptoms in each particular case. There is one peculiarity of the epidemic, however, that I must not omit to mention, as, when present, it dispelled all doubts, if any before existed, of the nature of the disease. I mean that which gives it the name

of "spotted fever." I allude to the spots which *frequently* make their appearance on the skin. These appear to be mostly of three kinds, viz., red, of a circular shape and of different sizes; purple, also circular, and spots of an irregular shape and of different sizes. These last named spots are made simply by extravasated blood beneath the cuticle (*ecchymosis*). The others appear to be mostly simple discoloration of the cuticle; although I have seen cases where the red spots appeared to partake more of the papular form, the cuticle being elevated and roughened. These spots are frequently wanting altogether, and when they do show themselves, are very variable in the time of their appearance and in their duration.

Causes.—Of the causes of this epidemic we know literally nothing. There is no apparent reason why it should have prevailed in Carbondale and vicinity last season, any more than at any other season or year. Our town is a coal-mining town, situated in the upper half of the Lackawanna valley, the soil of which is stony and gravelly, consequently loose and porous, giving no lodging place for water to stagnate. As would be expected, we never have any epidemics of a known malarious origin. In fact, Carbondale has always been remarkably free from epidemic diseases of every kind, and has been noted for being "a miserably healthy town!"

The first cases of spotted fever noticed in this place, as I have before remarked, were on Dundaff street. From thence it soon spread to other parts of the valley, and to adjacent townships westward. The mining villages and boroughs below us, Archibald, Hyde Park, Scranton, Dunmore, &c., suffered from the disease more or less, but none of them nearly as much as Carbondale. The little village of Clark's Green situated about twelve miles from us in a south-westerly direction, near the line of the Delaware, Lackawanna & Western R. R., suffered in proportion to its population, much more than Carbondale. This village lies out of the coal region, on the high ground west of the Lackawanna valley, and is surrounded by a purely agricultural community. It is very unlike Carbondale in its location, character of soil, business habits of its population, and in fact, in every other respect that you may name.

The Lackawanna valley is bounded on the east by a spur of the Alleghanies, called Moosic mountains. On the east side of these mountains, but few, if any, cases of this epidemic have occurred. The whole region of the country east of this mountain slope, appears to have been exempt from the ravages of this terrible scourge.

We now come to the vexed question of contagion. Is this disease contagious? I shall dismiss this question with but very few remarks. I know of numbers of instances, where the most rigid domestic quar-

antine was insufficient to shut the fell destroyer out of the loved circle; and where no particular vigilance was used to guard the family flock, I have yet to learn that the enemy was any the more likely to enter. The disease prevailed as all epidemics do, and unless we are prepared to abolish all distinction between epidemic and contagious diseases, I cannot call the spotted fever contagious.

Duration.—The duration of this disease was anywhere from seven hours to seven weeks; and in some rare instances, several months. The average duration of the fatal cases, may be stated, perhaps, at forty-eight hours. If the patient lived beyond that period, there was some chance for a recovery, which in every instance was very slow and tedious. In these protracted cases, the patient frequently suffered a great deal with pains in the head and other parts; was usually conscious, with, perhaps, occasional aberration of mind. In these cases, the emaciation was generally extreme. The patient was frequently a sight to look at, being almost literally nothing but skin and bones! Perfect recovery, in one instance that was under my care, took place after the patient had been more than five months in nearly a helpless condition.

Sequelæ.—The only serious sequelæ to this disease that I have noticed, is, that of deafness to a greater or less extent. In several instances with which I am acquainted, the hearing is entirely lost. Partial deafness was a frequent symptom during the disease, but in most cases, as the patient convalesced, the hearing was restored. Small abscesses, or pustular eruptions of the skin, and dropsical effusions were noticed in some instances.

Post-mortem appearances.—Not many post-mortem examinations were made during the epidemic. In those that were made, the physicians of the place generally, with more or less from neighboring towns, were present. The principal lesion discovered, was intense congestion of the blood vessels of the brain and its coverings, with evident traces of meningeal inflammation. The spinal cord in these cases, was not examined.

Treatment.—In speaking of the treatment of this disease, I shall be very brief. The fact is, the success of physicians here in treating spotted fever, was so small, as to lead us, when we approach the subject, to speak with becoming modesty. At least, five out of six, and probably a greater proportion of unequivocal cases of this disease, died. Frequently, when we were first called to see patients stricken with this epidemic, it was but to witness their agonizing struggles in the iron grasp of death. A few hours at the farthest, and all was over. What *could* the physician do? We *did* what we could The resources of our own knowledge and skill were brought into requisition, with all the aid that we could obtain from others. Day and

night we were at the bedside of the suffering and among the afflicted, regardless of our own personal comfort and convenience, intent only on the one thing, of staying if possible, the ravages of the pestilence.

It is not my purpose to speak of the different modes of treatment practiced in this disease by physicians and others. It is, perhaps, difficult to tell what good any of them did. Recoveries appear to have taken place under almost all kinds of treatment, or under no treatment, except such as practiced by parents themselves, and many of them not over intelligent at that.

The only remedy that I can speak of with confidence, is, very free and active counter-irritation about the head, neck, and shoulders, and if need be, along the spine. I have seen, repeatedly, unequivocal benefit from this course. I have used for this purpose, mostly, the common blistering plaster, (*emp. cantharid,*) although in many cases, measures that would produce a more sudden and active counterirritant effect, would, unquestionably be better. In addition to this, I now content myself with keeping the bowels open, and using such other remedies as the varying symptoms appear to indicate. To relieve pain, and allay extreme restlessness, I give opiates. When the pulse is small and feeble, and other symptoms of prostration are present, I use tonics and stimulants, and often with apparent advantage.

In looking over the preceding pages, I perceive that there are some facts connected with this disease, that may be of interest to the profession, which I have inadvertently omitted to mention in their proper connection, I therefore take the liberty to append them here.

Not only the young were the most liable to the spotted fever, but its subjects were mostly the plethoric and robust—those in the full vigor of health and life; and the disease, to this class, appeared to be more speedily and surely fatal. I think that more boys than girls were attacked with the epidemic, although the disparity was not very great. It was common for the disease to enter a family of a number of children and young persons, and take *one*, leaving the others uneffected. In other instances, *two* would be attacked, while, perhaps, quite as frequently *more*, and sometimes, nearly the whole family would be taken down with it. In these cases, the different members of the family were apt to be attacked at or near the same time.

The great majority of women taken with the disease, were mothers who had previously attended children sick with it, and were worn out with want of sleep, care, anxiety, and grief. Undue fatigue, and exposure to cold appeared to be, in some instances, an exciting cause of the disease. This seemed to be the case with a clergyman of the place, who was attacked and died with it. The proportion of recoveries among mature adults, was greater than among children and young persons.

ARTICLE VIII.

On the Modus Operandi of Quinine. By H. N. Eastman, M. D., of Geneva Med. Col., New York.

Quinine, or the chief active principle of the cinchona, has become, as every one in the profession knows, one of the most important articles of the materia medica at the present day. The question naturally arises, why is this? Why are intelligent physicians everywhere now using pounds of this remarkable article, where they formerly administered ounces? To this, it may be answered, that the present type of nearly all diseases is very different from what it was formerly; that it has been found, by almost universal experience, that a very large proportion of the ailments prevalent in this age ill bear depletion, but are more or less benefited, if not cured, by other less objectionable measures, and especially by this efficient, though comparatively innoxious remedy. The use of this article is no longer confined to intermitting fever, or any other form of periodical disease; nor yet to the apyrexial stage of such maladies, when employed as an antiperiodic, as was once the case—being then supposed to be not only useless, but absolutely baneful, if not exceedingly dangerous. When given under other circumstances, though it is still true that when the opportunity is presented a much more palpable effect will follow the exhibition of the same quantity during the intervals that occur in periodical diseases than will be evident when given in the stage of exacerbation; and consequently, when a selection of time can safely be made, it is always preferable to administer the medicine during the former stage; but in urgent cases, as in pernicious or congestive fever, no time is now lost by judicious practitioners in waiting for a truce in a malady so rapidly fatal, which may, nay, which too often *does* not come. In all such cases, it is now universally conceded, I believe, our only safety consists in the immediate and heroic exhibition of quinine, in connection with other remedial measures. Diseases not at all paroxysmal, or at least such as are not so regarded, are now very generally treated with uniform success with this article, as most of the forms of continued fever, and very many of the phlegmasiæ, as pneumonia, pleuritis, peritonitis, rheumatism, &c., that is, in connection with other curative agents.

Admitting the above statement to be true, a question presents itself; What is the modus operandi of this almost univeral remedy?

How does quinine affect the system in subduing intermittent diseases, sustaining the powers of life in continued fever, in apparently cutting short, at least in some instances, local inflammations, or overcoming congestion and supporting the waning vital energies until a favorable change or convalescence be established?

The object of this paper is to show the true way in which this article operates in restoring healthy action to the system. It is usually classed, by writers on materia medica, and I think very properly, among tonics; but most clearly it does not give tone by restoring directly to the blood any ingredient natural to that fluid, as in the case of iron, the opinion of Headland to the contrary notwithstanding, who has labored in his treatise on the "Action of Medicines," very ingeniously and plausibly to prove that it is a true restorative haematic, supplying the blood with a principle analogous to if not identical with *taurine*, one of the constituents of healthy bile.

I will not enter upon any argument to disprove this theory, for I conclude that very few can be found who are prepared to admit it. There can be little doubt as to its tonic effect—that is, its power of permanently restoring or augmenting the normal action of the vital forces; and this effect, I judge and shall attempt to show, must result from its peculiar action on the great nerve centres of organic life, rather than from any restorative or catalytic influence produced in the blood itself, through which it merely passes to reach those centres; that, like all other remedial substances not strictly restorative, it is eventually eliminated from the system through some one or more of the emunctories, though when given in moderate quantities, it may be difficult if not impossible to detect it in the excretions, as can be done in case of most if not all the other medicinal agents, especially the catalytics. I shall not here enter into any long argument to prove that the ganglionic system of nerves is, to a very great extent at least, an independent system, possessing powers peculiar to itself, though intimately connected with the cerebro-spinal, whose functions are also peculiar, differing essentially, for the most part, from those of the former; a statement, the truth of which, it appears to me, is evident to any one who carefully studies the phenomena of animal and organic life. I regard the functions of animal life, to wit, those of sensation and voluntary motion, including of course, all the intellectual operations, as dependent solely on the cerebro-spinal system of nerves; while those of organic life appear equally clear to result mainly, if not entirely, from a power generated in and transmitted through the great sympathetic system. As the nerve filaments, springing from the ganglia or great centres of these different systems, are in their course intimately connected

and united, thus bringing in close relation all these centres; so the functions of the respective systems, though differing in themselves, are more or less blended together, so that as we approach the confines of each, we are unable to trace with perfect accuracy each phenomenon to its exact origin. Like the colors of the prism, we can clearly perceive their separate shades, differing materially from each other, while all are blended in one harmonious whole.

Among the vital phenomena are included absorption, secretion, involuntary contraction of the unstriped muscular fibre and capillary circulation, which last depends probably, in part, on the "vis a tergo," from the heart's action, but quite as much on a spontaneous force furnished by the ganglionic centres, and transmitted to their coats through the delicate nerve filaments that twine around the vessels to their remotest ramifications, thus surrounding the whole vascular system with a complete network or plexus of nerve-fibre originating in the sympathetic ganglia.

Whether this innervation of the capillaries results in producing a kind of peristaltic action of the coats of those vessels which keeps up the circulation through them, or merely gives tone to their parietes, thus enabling them to resist the internal pressure of the contained blood forced into them by the heart's action, and in this way maintaining the onward current, instead of the vessels yielding and becoming distended and engorged or congested, is a question not quite settled; perhaps the latter explanation is the more probable, while a chemical affinity between the delicate walls of the vessels and the circulating fluid within very likely has somewhat to do in effecting the same results. Whatever be the true theory of the capillary circulation, experiments have clearly shown that when the connection between the ganglionic centres and the capillaries of certain parts is destroyed or suspended by section of the sympathetic nerve filaments supplying the part, congestion and subsequent inflammation of the tissue follow, with the ordinary results.

This would seem to prove that the circulation through the capillaries depended, somewhat at least, on an influence conveyed to them through this system of nerves; and the natural inference is, that any abnormal state of the centres whence such influence is supplied to a part, as also that of the filaments that transmit the same, would be followed by a disordered circulation of the capillaries of the part, or a congestion and it may be, inflammation of the tissue of which it is composed. Now such a morbid state of any one or more of the organic nerve centres may result from various causes, as mechanical injury, cold, the depressing effect of deleterious material, as poisonous miasm in the blood, coming in contact with their delicate tissue,

whether generated within the system, as in pyemia, or entering the blood from without, as in case of marsh miasm; strong mental emotions, may also produce the same or similar effects, paralyzing, as it were, for the time those centres, through their intimate union with the cerebral, on which such mental impression is first made. If I am correct in my statement of facts, and have reasoned logically from the premises laid down, we readily perceive a legitimate cause of many, at least, of the local ailments, the congestions and inflammations that we meet with; and this being thus, we as readily comprehend the rational indications of treatment; to-wit, the restoration of the vital energy of the organic nerve centres, on which, as above stated, the normal circulation of the capillaries depends, or the sustentation of the waning powers of the vital centres, by artificial means, till the morbid material be eliminated, and healthy reaction be restored; while, at the same time, we endeavor to relieve the local engorgement by topical depletion, revulsions, arterial and nervous sedatives and anodynes, with, it may be, in some instances, general bleeding to lessen the heart's action, and thus take off the "vis a tergo" while we are endeavoring to restore the wonted tone and capacity of the capillary vessels. Nearly all the phenomena of disease, so far as we can discover at least, depend on, or are connected with abnormal capillary circulation, as congestion, inflammation, morbid or suspended secretion, &c., and so far as this state results from enervation of a part or the whole of the organic nerve system, produced in the way above stated, or it may be, for want of the stimulus of healthy blood to the nerve tissue, it follows, that any medicinal substance that acts specifically on those nerve centres of organic life, supplying, for a time, it may be, artificial support, until the morbid agent be eliminated from the blood, its normal condition be restored, or healthy reaction be established, is the appropriate agent for bringing back healthy action, or in other words, acts as a specific in a given case, as quinine in a malarious disease. Now while some substances as the mineral agents produce in some instances the same ultimate effect, slowly, by a restoration or catalytic action on the blood, as is the case with iron and arsenic, quinine seems to accomplish a similar result, and usually far sooner, by its specific action on the sympathetic nerve centres, as above stated, experiments never having shown, in the use of this article, any palpable change in the blood, as in the use of haematic medicines, other than a gradual restoration of its normal state, apparently brought about by the efforts of nature, while the deleterious effects of the abnormal blood were counteracted by the artificial sustentation of vital nerve power through this agency. Thus it is, that while iron and other haematic

medicines act as restoratives and catalytics in the blood, quinine and some other bitter vegetable principles at the same time are found by actual experiments materially to facilitate their action or augment the restorative process by, what I consider, their specific effect on the organic nerve centres.

This view of the rationale of a fact of almost universal observation, readily explains the reason why practitioners within the last few years, have simultaneously, without concert of action or knowledge of each others views, employed with so much benefit, the combination of quinine and iron, and other vegetable and mineral substances in the treatment of various diseases. The result of such practice is palpable, while the modus operandi may have been unthought of, or have eluded observation.

The discovery of any effect, is often, if not generally, merely the result of accident, which no one could have rationally predicted; but the ascertaining of the cause of an effect, or the way in which it is produced is the province of science; without this our profession sinks into mere empiricism, and may be practiced as well and successfully by the shrewd, illiterate individual, as the most scientific man.

With these views, I am unavoidably led to the conclusion, that quinine, instead of being primarily a cerebral or arterial stimulant, *i. e.*, an excitor of the brain or heart's action through the cardiac branch of the par vagum, an off shoot of the cerebro-spinal system, is actually a sedative to the arterial circulation, or an antiphlogistic; that the sedative is effected by a restoration of the capillary action, in the manner above stated, *i. e.*, by supplying the requisite amount of nerve power to those vessels through its tonic and stimulating effects on the organic nerve centres, the origin whence that force is derived, and for want of which capillary circulation fails, while the heart, through sympathy, is provoked, so to speak, to put forth extraordinary efforts to overcome this obstruction at the terminal arteries, the very cause and essence of febrile action.

In some instances of capillary engorgement, when the heart's action is feeble from exhaustion or preternaturally slow for want of normal irritability, quinine may operate as an indirect cardiac stimulant, by obviating the capillary obstruction, thus restoring the heart's action to its normal standard by removing a portion, at least, of the essential cause of such depression; but, as a general rule, quinine when freely used acts as an arterial sedative, as above stated, and, with the theory of its action already explained, its use is entirely compatible with the contemporaneous exhibition of direct arterial and cerebral stimulants; accordingly we find physicians in malarious regions directing strong stimulants to be given during the cold stage

of congestive fevers, as well to prevent the too sedative effects of enormous quantities of quinine given to overcome congestion, as simply to stimulate the heart's action and restore heat during the stage of depression, independent of the effects of quinine; though I regard this reasoning fallacious: I would rather consider the two remedies as acting in concert; the one, quinine, acting on the vital nerve centres, sustaining them under the depressing effects of the malaria, and thus restoring capillary action and removing congestion; while the other acts directly on the heart and arteries, through the cerebro-spinal system, stimulating them to the performance of their normal function, while, at the same time, the capillary obstruction is being removed.

On the same principle, opium, though regarded by a few as incompatible with quinine, is nevertheless now almost universally given as a valuable adjunct to this article, by virtue of its stimulant and anodyne action on the brain and its appendages, while as I contend the latter acts specifically on the sympathetic nerve centres. In this way we can easily understand how such agents as quinine, iron, opium, alcoholic stimulants and nutritious diet and even alteratives, simultaneously employed, may all harmonize, in some cases, in bringing about the one great result. Each, however, accomplishing its own specific effect, in the common work of restoring the normal condition of the system; no one performing the part of another, nor any one being able to be advantageously substituted for another; hence the importance of a wise discrimination and selection of these agents when all are not clearly indicated. Regarding as I do, quinine, as *one* of the chief of the antiphlogistics, if not *the* chief, we can easily reconcile ourselves to the present almost universal employment of the article, as our sheet anchor, not only in nearly all forms of fever, but also in most of the phlegmasiæ, even in inflammation of the brain and spinal cord, as well as that of the lungs and other important viscera.

The very essence of fever would seem to depend, at least, so far as the vital functions are concerned, on the presence of some "materies morbi," circulating in the blood, brought by that fluid in contact with the organic nerve centres, depressing or, as it were, paralizing their power, and in this way, causing various local congestions, if not universal engorgement of the capillary vessels over which this system especially presides. The same depressed state of these fountains of vitality will also account for other deranged functions that characterize fever and the various phlegmasiæ, disordered or suppressed secretion, absorption, assimilation, digestion, &c., all of which depend in part, directly on the main force derived from this same source; and in part on the integrity of the capillary functions, on the due

performance of which all the physiological changes more or less depend. The cold stage of every fever is but one of congestion, of more or less of the internal viscera. The same is true of cholera, asphyxia, which is but one form of malarious fever, of peculiar origin and intensity, and every local inflammation is preceded by more or less congestion in the part, before the changes occur that characterize the true inflammatory stage. Now in all these instances, quinine administered in sufficient quantities, just before the period of engorgement, or at the time when the vital centres begin to falter under the depressing effect of the morbid poison, whatever it be, will, for the most part, by its corroborant influence on those centres, maintain their power for the time, and thus prevent the capillary congestion that would otherwise occur. This premonitory stage of congestion, so to speak, is much easier obviated, and consequently requires much less quinine than is necessary to overcome that stage when fully formed, on the principle that, "an ounce of prevention is worth a pound of cure:" consequently, if for any cause we fail to administer this febrifuge till actual engorgement exists, we are obliged to give much greater quantities in order to accomplish a satisfactory result. This view of the modus operandi of quinine, and other analogous bitter vegetable substances, satisfactorily explains the rationale of what would otherwise appear to be contradictory treatment, to wit: in extreme cases of local engorgement or general congestion, general or local bleeding, as the case may be, to relieve mechanically, as it were, the over distended and paralized capillaries, by taking off the "vis a tergo," or the internal pressure of the contained blood, while the vital force is at the same time restored by supplying the requisite amount of nervous energy to those vessels in the manner above described. This harmonizes McIntosh's treatment of intermittents by the lancet, with the more common mode of treatment with quinine or arsenic.

In short, this supposed action of quinine alone affords a rational explanation of the now almost universal and generally successful treatment, not only of congestive fevers, but local phlegmasiæ with what are usually termed tonics and stimulants, independent of, and sometimes in connection with local and general depletion; stimulants or excitors of the cerebro-spinal system being often used to sustain this portion of the nervous system, while quinine or other bitter tonics are employed in connection to support or perform a similar office to the sympathetic nerve centres. While I regard quinine as acting primarily on the ganglionic nerve centres, inasmuch as in moderate quantities, it produces its effects on the vital forces only, without any palpable impression on the cerebrum, I conceive that it acts

secondarily or ultimately on the brain, since when administered in large doses, it produces morbid cerebral sensations, while chloroform would seem to act primarily on the centres of animal life, and secondarily or ultimately on the centres of organic life, in this way annihilating respiration and circulation, and destroying life instead of producing a temporary suspension of sensation and motion.

If quinine sometimes acts, as it undoubtedly does, as a direct stimulant or excitant of febrile action, it does so, I conclude, merely as a local irritant to the coats of the stomach, in consequence of its not being absorbed ; just as any other substance would do in the stomach if not readily taken up ; thus it not unfrequently acts as an irritant emetic, when the function of absorption is depressed in morbid conditions of that organ so general in febrile and inflammatory diseases; but I am persuaded that it never excites or augments febrile action after being duly absorbed, except, perhaps in some peculiar idiosyncrasies ; so far from this, I regard it, not only as the great febrifuge but the great antiphlogistic.

ARTICLE IX.

Ligature of the Subclavian Artery. By Doctor ARMSBY.

[Communicated to the Medical Society of the State of New York.]

At the last annual meeting of this society I had the honor to report a case of "Ligature of the right Subclavian artery, for axillary aneurism," with successful result. The patient was Mr. Furguson, of Glens Falls, N. Y., twenty-eight years of age, of large and robust frame. The ligature was applied at the external border of the scalenus anticus, and came away on the thirty-ninth day. Recovery was rapid and complete, and the patient is now in sound and robust health.

I have another case of ligature of the right subclavian artery to report, with unfavorable result, owing to the feeble condition of the patient at the time of the operation.

On the eleventh day of October last, I was called to see Major Jacob C. Clock, U. S. A., of St. Johnsville, N. Y., who had been wounded by a rifle (Minie) ball, at the battle of Occoquan, Va. The ball entered in front of the shoulder joint, passed on the inner side through the axilla, fracturing the scapula, and coming out near the spine. One or more of the larger branches of the axillary artery were wounded.

He suffered much from loss of blood, pain and exposure on the field, and during his removal to the hospital at Winchester, Va. While in this hospital he had several attacks of hæmorrhage, and suffered severely from intermittent fever.

He reached home on the first day of October, eleven days after the wound was received, and was placed under the charge of Dr. George C. Raynor, of St. Johnsville.

There was great swelling and inflammation of the parts, and the chills and fever continued a few days after his arrival. Under judicious treatment he rallied, and seemed to improve for about ten days. On the eleventh of October, twenty-three days after the reception of the wound, profuse hæmorrhage occurred, and a large quantity of blood was lost.

When I arrived I found the patient pale and feeble, pulse 130, and the wound much swollen. The only surgical means that could be used, ligature of the subclavian artery, gave little promise of success. The operation was performed by candle-light, in presence of several

medical gentlemen. The first incision was about three and a half inches in length, along the superior border of the clavicle. The second, over the external margin of the mastoid muscle, intersected the first incision nearly at right angles. In elevating the flap, the external jugular vein and several small arteries were secured by ligatures. In dividing and elevating the deep cervical fascia, several large arteries were encountered which rendered the operation tedious and embarrassing. One of the largest nerves of the axillary plexus rested directly upon the artery and seemed to pulsate strongly. I cast the ligature around it, but on examination found and secured the subclavian under the outer border of the scalenus anticus.

The hæmorrhage immediately ceased, and but little blood was lost by the operation. The patient bore the painful and tedious operation exceedingly well, and for twenty-four hours there seemed to be every promise of a favorable result. But on the second day he had a severe chill, and on the third day, when I visited him, I found the wound gangrenous, and the patient sinking. He died on the fourteenth of October, twenty-six days after the wound was received.

If the operation could have been performed at an earlier day, it might have been successful. The medical treatment by Dr. Raynor, was judicious and skillful.

The condition of the patient when the wound was received, the loss of blood, and the exposure on the field and while traveling, combined to render the result unfavorable.

I felt justified in performing the operation as it seemed to afford the only hope of saving the life of a brave and gallant officer. Major Clock had a numerous circle of devoted and patriotic friends, and fell at the head of his command while bravely cheering on his men in defence of his beloved country.

ARTICLE X.

Suggestions relative to the Pathology of Pneumonia. By S. O. Vanderpoel, M. D., Albany, N. Y.

The opinion very prevalent in the profession, and consequently among the community, that pneumonia is induced solely by exposure to cold, or to sudden variations of temperature, has, we think, a pernicious influence upon the treatment, based as it is upon a wrong pathology.

That pneumonia is excited by causes more intimately connected with the healthy workings of the system than mere exposure to cold, we think is plainly evident; else why will the same person at one time undergo prolonged exposure and experience no ill effects, while at another, comparatively slight, he is stricken with the malady; or why are A. and B. apparently equally endowed with the capacity to resist morbid influences, and yet when equally exposed to variations of temperature, the one has pneumonia while the other escapes.

One of the first things which strikes us in looking at the subject from this stand-point, is the relation of pneumonia with certain diatheses, and with traumatic diseases subjected to an infected atmosphere. These diatheses are intimately connected with the circulation of morbid or poisoned materials in the blood which fail to be eliminated by the proper excretory organs, or to the direct inhalation of a vitiated atmosphere. This latter condition has been frequently noticed in large army hospitals, where proper hygienic precautions are not taken. In a limited experience we have observed case after case dying from pneumonia, while the wound was apparently progressing favorably, where the external atmosphere was bland, but where from imperfect ventilation, or the great mass of suppurating wounds, the air in the wards was tainted with decomposing effluvia.

Our opinion therefore is, that pneumonia cannot result *alone* from exposure to cold, no matter how prolonged and intense; but that co-existing with this exposure there must be morbid materials circulating in the system which, acting on the sentient fibres of nerves that supply the air vesicles, partially paralyze them, and permit a change of temperature or any irritant cause to produce the phenomena of inflammation and its attending sequences. Further, that in pneumonia two phases of disease are presented, the one wholly dis-

tinct from the other. In the first stage, lasting from four to seven days, it is the system struggling to eliminate or cast off the poisoned material—a stage always attended by the most acute symptoms and violent arterial reaction, the close of which is marked by a decided abatement in all the constitutional symptoms, and an exudation into the air-vesicles called hepatization. From this point begins the lung disease proper, and whatever of subsequent constitutional symptoms ensue, arise from efforts to relieve the solidified air-vesicles of their foreign material.

Perhaps this will be better appreciated by following the natural history of a case of simple pneumonia. First, the course of the fever as measured by the thermometer and the pulse, dating the onset of the disease from the shivering, we usually find on the third day an active febrile condition, with flushed cheeks, constant cough, viscid bloody expectoration, hurried breathing with crepitation and the commencement of bronchial respiration at the base of the lung. During the third, fourth and fifth days the temperature is uniformly high, rising from 98° as a normal standard, to 104°–106°, and with slight alternations of 1° and 2°, between morning and evening, maintaining this temperature until some time on the sixth day, when a rapid fall takes place, so that some time during the seventh it marks but 98°, the normal standard. The pulse follows closely the increase of temperature, rising to 100°, to 120°, and about the sixth day falling to 90°, 80°–70°. Respiration rises to about 40°, and does not decrease in proportion to the heat and pulse.

Second. The course of the local lung symptoms—crepitation—becomes less, while the bronchial respiration increases, with the increasing hepatization. This reaches its maximum about the sixth day, when a *crisis* occurs, a sudden and rapid defervescence, usually accompanied by a strong action of some eliminating organ, such as the skin, the kidneys or the bowels. The sputa, which are most bloody on the third and fourth days, become more rusty on the fifth and sixth, after which they are less viscid and become free from blood or hæmatine. After the seventh and eighth days the bronchial respiration begins to lessen and ceases from the twelfth to the sixteenth day. From this casual and rapid description, it is seen that the crisis occurs, with a rapid and marked diminution of the constitutional symptoms, at the very time when the lung trouble—the hepatization—is at its height, and when, if we suppose mere inflammation of this tissue constituted the disease, there would be the most decided evidence of constitutional disturbance. Rather do we suppose, that with the elimination of the blood poison from the economy into the air-vesicles, the active disturbance ceases, when the depurating organs quietly convey it from the economy.

We propose to present our considerations for this belief under the heads of crisis, diathesis—the action of eliminating organs and treatment.

From the earliest period of medicine the word *crisis* has been associated with the idea of elimination: as if the system had been striving to free itself from some foreign material acting banefully upon the whole organism. Of course among the ancients the idea underwent many fanciful changes, but this was the inherent principle. We now understand by the word, a change for the most part favorable, which arises in the course of a disease, announced by some particular phenomenon, as an abundant excretion, either by hemorrhage, sweating, or deposite in the urine; and at the same time a marked subsidence in all the constitutional symptoms. The term is rarely applied to local inflammation of organs or tissues, but rather to those conditions of the general system where the fluids seem poisoned, or impressed by some deleterious material which nature is struggling to cast off. Such is the case in the different forms of malarial and typhus fevers, and in those peculiar conditions of the system, represented by the diatheses, and which we term the strumous, gouty, rheumatic, &c. The expression "favorable crisis" in any of these affections, is synonymous with some decisive eliminative act. Whatever of subsequent sickness occurs in the disease, arises from incidental causes, or injury to some organ affected by the eliminative process. Applying this to pneumonia, we contend that the sickness up to the fifth or seventh is this struggle for elimination; which when completed a decided crisis occurs, marked by an abatement, indeed in most cases, by a decided subsidence of all general symptoms. Not those however of a local character, as the respirations remain near forty, and hepatization is then complete. It does not invalidate this position to ask, why the peculiar poison in pneumonia should seek the lungs. We know them to be one of the three great eliminative organs in the economy, and we recognize daily, how seriously the other two, the skin and kidneys are affected when by the presence of some foreign element their excretory functions are impaired. Dr. Parkes the able clinical lecturer at Edinburgh in relation to this point, says: "The only blood disease which has yet been indicated by the supporters of this view, as anterior to pneumonia is hyperinosis (excess of fibrin), and as hyperinosis occurs in rheumatism without pneumonia, it is evident that there must be some other cause, either in the blood, or in the local structure of the lung, which locates the disease in that part. Now hyperinosis is really anterior in pneumonia as in rheumatism; that it is not however the only condition will be generally admitted. But what other blood affection is there?

None has yet been indicated to my knowledge in the acute sthenic pneumonia of young persons without gouty or renal disease. But there is one point on which I have been trying to collect evidence for some years, but at present without sufficient success. It is well known how frequently the liver is affected in pneumonia, so that some amount of jaundice is not at all uncommon, and sometimes bile pigment appears in the pneumonic sputa. I have also found in some cases evidence of liver affection for some time before the lung disease especially the so called torpor with deficient biliary flow. Is there then any condition of the liver which adds something to the blood which ought not to be there? Taurin has been found in the healthy tissue of the lung; but in the hepatized lung, it seems from Verdeil's observations to be in excess. Is it some compound of this sort which in combination with the hyperinosis, determines the localization of the blood disease, or produces by its irritation the inflammation of the lung?

Diathesis.—In giving the natural history of diseases, writers too often fail to recognize the influence of *diathesis*; while in practice it is one of the most important elements to consider. It is this idea, to which laymen unconsciously attach so much importance when they say of the physician "he understands my constitution." These "personal peculiarities" the careful physician must recognize in practice, oftentimes assuming prominence, far greater to the vital relations than the peculiar malady under which the patient suffers. The system thus stamped with a "peculiarity" or diathesis, tends to the repeated expression of some form of ill health, always in the same way. They are by no means limited to the individual, but are transmitted from parent to offspring, and thus become hereditary. Not traceable to the extrinsic action of a virus, and with none of the properties attached to infection, they are apparently generated, developed, and sustained under the influence of an intrinsic blood-poison; the result of perversion of the nutritive or assimilative functions of the individual. Dr. Walsh thinks "each member of the group has its specific morbid principle in the blood, uninterchangeable with the rest, just as any one virus is uninterchangeable with others." It is only necessary to name the rheumatic, gouty, strumous, and syphilitic as the conditions indicated in their respective diatheses. True other divisions of a more general character are at times made by the surgeon, and which are really of vital importance from his standpoint; as the plastic and aplastic diatheses; but our present argument has only to do with the former, which are inherent and constitutional, and not with the latter, which are more or less acquired and accidental.

Now, it is we believe an admitted clinical fact, that pneumonia in the great majority of cases, appears in persons laboring under one or

the other of these diatheses. We recognize also in such constitutions, the importance of a free action of the eliminative organs, and how soon the respective diatheses become apparent, if the functions of either of these organs are impaired. When the poison seeks the kidneys for an outlet, suffer though they may in their function, yet their tissue less delicate, and less essential to the vital organization than the pulmonary does not manifest itself by as active local symptoms, or when defervescence occurs entail secondary lesions, which call for new efforts of the economy to restore. The same is also true when the functions of the skin are temporarily impaired.

It does not invalidate the theory of a blood-poison as a latent cause of pneumonia, to state that its immediate determination to the lungs may be owing, either to the depressing influence from exposure to cold, or as in an infected hospital to a poisoned atmosphere acting on sentient fibres, weakened in vitality from its influence; in the latter case, an acquired diathesis, the aplastic, supervening.

If the lungs were the only organ implicated in an attack of pneumonia, there would be strong ground for regarding it a simple, idiopathic inflammation, but we shall see that in addition to the predisposing influence of diathesis, both the kidneys and skin are seriously impaired in function, and that the signal for their return to a normal condition, is the completion of the eliminative process, corresponding to hepatization of the lung. The amount of water secreted by the kidneys, is lessened from one-third to one-half; while that of urea is greatly increased during the height of the disease. These changes are easily accountable from the general febrile condition; the former being always retained in fever, and the latter marking the metamorphosis of tissue resulting from it. The feature peculiar to pneumonia, is the great diminution, or even entire absence of chlorate of sodium from the urine, during the existence of the fever and the process of hepatization. Even when administered by the mouth it does not appear; nor does it re-appear until the process of resolution is established. Albumen is present in the urine, in a large proportion of the cases, most common at the height of the disease. It cannot be ascribed to absorbed exudation, appearing as it does chiefly before resolution; but rather to the implication of the kidneys in the general congestion and exudation; the most marked local seat of which is the lungs. "One conclusion may certainly be inferred, namely, that the disease of which we are speaking involves profound changes in the chemistry of life."

Finally—the relations of treatment—of no disease has there been such extreme and radical views of treatment, as a single decade has witnessed with reference to pneumonia. From the heroic "coup,

sur coup" bleeding of Bouilland, or the large doses of antimony by other practitioners, to the earnest advocates of a purely expectant treatment we have presented every shade of doctrine and theory. This great contrariety of opinion shows at least, widely different views of pathology, since upon our notions of this latter must all treatment be based. It points also significantly to the fact, that these views are far from being fixed. Experience tells us wherever the pathology of a disease is definitely settled, the treatment is at once simple and uniform.

Bouilland regarding pneumonia strictly as a local inflammation would jugulate it, suppressing every effort of arterial re-action by depletion. Those who pursue an expectant course but follow out the self-limiting theory in the duration of disease. Statistics, imperfect as they are, decidedly favor the latter as preferable of the two extremes. Pneumonia cannot be jugulated by depletion, any more than can a case of acute rheumatism. As in rheumatism the severity of the symptoms may be mitigated, still the mortification is experienced of seeing it prolonged into a chronic stage; so in pneumonia, depletion is far more apt to retard than aid the evolution of the subsequent stages of the malady. On the other hand, the advocates of a purely expectant treatment abandon themselves to a blind fatalism, in which all diatheses, and all conditions of vitality have but the one recuperative agency—nature. We are not of those who favor either party in their extreme views. While on the one hand there are cases in which the hyperæmia is so intense as to cause great pain and dyspnœa; to relieve which a moderate bleeding is beneficial; there are others, where no treatment save proper hygienic measures and diet are necessary for the cure. Unfortunately the latter class of cases, typical in their character, are comparatively rare. Pneumonia is a disease, where in a peculiar manner, the diathesis and vital powers are to be studied; for while in *all* we strive to aid nature in the eliminative process, we quite as frequently find it necessary, even in the early stage, to sustain by stimulants and tonics, as in the stronger vitality, temporarily to depress. The crisis once developed, hepatization completed, no one will question the propriety of sustaining the economy, for the more perfect elimination of the morbid material.

It would be an interesting study to show how unsatisfactory the generally received notions of the pathology of pneumonia are to the most intelligent writers of the day. Struggling as it were for some stand-point by which it could be classed among diseases of a specific character, Todd in his clinical lectures points to this idea of a morbid material seeking elimination—"if you watch the changes which a patient in pneumonia undergoes in his progress towards convales-

cence, you will find more or less sweating always takes place. Sometimes the sweating occurs freely, and it is then considered *critical*. Sometimes too a *critical* discharge of purulent matter from the lung takes place by expectoration ; now and then the kidneys about this time secrete much more urine than previously ; and occasionally, though certainly very rarely a *critical* diarrhœa occurs. Always chloride of sodium begins to escape from the system through the urine, from which during the height of the disease it had been excluded. All this looks as if *something*, which caused the morbid change in the lung were eliminated from the system in one or more of the secretions ; and therefore to promote these should be the aim of our treatment."

We close with the more direct propositions of Dr. Parkes, summing up as they do fully, the views we have ventured to elaborate in this paper. "Pneumonia is a blood disease of some sort, of a nature not thoroughly known, but which consists, in part, in an augmentation of the fibrin, as in acute rheumatism. Increasing up to a certain point, and giving rise to the slight malaise which precedes all cases of pneumonia it is at last brought to a head by some exposure, by a dietetic error, or by reaching a point at which the functions of the blood are seriously interfered with. Then ensues high general fever, from implication of the nervous system, and at the same time some organ or other is, on account of special affinity for the morbid blood, or from previous damage to its structure specially irritated. In pneumonia, the lung is the seat of election, and there is rapid hyperæmia, and transudation of fluid into the air-cells. By this transudation the morbid blood is purified. The process is analogous to that of gout, in which a diseased blood gives rise to a local disease by the deposition of urate of soda in and about joints. When the localization and consequent purification is finished then the fever ends. There remains the lung exudation, which gradually softens down, is partly expectorated, partly absorbed ; and in the process of absorption, it may produce again secondary contamination of the blood, and certain affections of other organs, which constitute those secondary affections which sometimes complicate the after course of pneumonia."

ARTICLE XI.

Facts in relation to Placenta Previa, with a review of the various opinions respecting its Anatomy, Physiology, Pathology and Treatment. By Isaac E. Taylor, M. D., Professor of Obstetrics, Diseases of Women and Children in Bellevue Hospital; Attending and Obstetric Physician to the Bellevue and Island Hospitals, &c., &c., &c.

The celebrated Noegele has truly observed: "That there is no error in nature compared to this (placenta previa), for the very action which she uses to bring the child into the world is that by which she destroys both it and the mother." What subject more pregnant with interest to the gencalogist? What of more vital importance to the mother and her offspring, and how incumbent it is that the obstetrician should possess and entertain as clear, perfect and correct views and opinions as it is possible for him to obtain in relation to the subject in an anatomical, physiological, pathological and therapeutical sense.

The subject of placenta previa has for the last few years been so amply and to all appearance so fully investigated, especially by Professor Simpson, to explain his own views and opinions on the separation of the placenta from the interior of the cervix uteri, in place of version, and by Dr. Barnes, of London, to illustrate his new theory—the True Physiology and Treatment—and by Dr. W. Read, of Boston, U. S., to advance his theory respecting the special cause of the hemorrhage, and also to offer his most invaluable and extensive statistics on the history and treatment, which are the most complete that have as yet been given to the profession, that it might appear presumptuous for any one to undertake to offer further suggestions, or attempt any elucidation of the subject; but I hold that every member of the profession should lend his aid or advance his views if they will cast the slightest gleam of light from a different standpoint in explanation, either of its anatomical, physiological, or pathogical character and treatment.

True as the remarks of Noegele are, yet how emphatically true are the efforts of nature to avert the consequences of this dangerous complication in the parturient woman during utero gestation and actual labor, and how imperative it is that the obstetrician should be fortified with those principles springing from scientific and practical investigations, that will give confidence to him in those perilous emergencies, and compel him to trust to nature more than has been done, and that not meanly or stintedly, but with a full and just apprecia-

tion of her powers and ability, with his assistance and correct judgment, to lead the suffering patient through this critical period of her existence with security and safety; and thus educated, he learns the proper time to act as well as when not to act, for it is the province of the medical man to endeavor to remedy where he cannot prevent.

Previous to my entering on the subject of placenta previa, I shall refer to an article I published in the June number of the American Medical Times, New York, for 1862, on the non-shortening of the supra and infra vaginal portion of the cervix uteri during pregnancy; and I concluded by presenting the following propositions:

1. That the cervix uteri, supra and infra vaginal portion, does not unfold or lose itself during gestation in the body of the uterus, and the cervix uteri become obliterated or effaced at the full term of pregnancy, as Bandelocque, Gooch, Dewees, Meigs, Scanzoni, Montgomery, Bedford and others believe.

2. That the cervix uteri is not lost or merged into the vagina, by dilating from below upwards, and becomes obliterated by total effacement at eight to eight and a half months or full term, as Stollz has taught, Caseaux promulgated, Chailly and others believe, but it remains of its natural length, and is sometimes even longer.

3. That the whole cervix, supra or infra vaginal portion remains intact up to the full term of pregnancy, and for several hours during the first stage of labor.

4. That the shortening, as it is termed, is only apparent to the touch, consequent upon the ramollisement and physiological hypertrophy that takes place during gestation, the cellular tissue becoming infiltrated by the change incident to pregnancy, and hence its breadth is greater than natural, softer and flabby.

In multipara, where laceration of the os tinca has occurred on one or both sides, and the glands enlarged, the labia are everted, the os patulous, as is noticed in many cases of cervical leucorrhea, and hence the finger can be introduced, at the seven, eight and nine months, to the internal os uteri and touch the membranes of the child; and should the cervix have undergone a more perfect softening, the os tinca and cervix may be dilated a half to three-fourths of an inch in diameter, though the whole cervix uteri remains.

5. That in primipara, the finger cannot be introduced into the external os uteri; but in exceptional cases it may reach through the cervix half-way.

6. That the external os is always felt first, and not as some have supposed by Caseaux's views, the internal os, unless lacerated and everted.

7. That the secretion of the cervix uteri, which forms the so-

called mucous plug, does not remain to the full term, but is changeable from time to time, and could not be in eversion of the cervix.

8. That the more perfect the ramollisement, the shorter and quicker the labor.

9. That when labor sets in, especially in a primipara, the cervix, even if obliterated, and the os tinca, the size of a five-cent piece, can be clearly defined from the body by the difference it presents to the touch of the thick, round and soft portion of the body, and the tense thin membranous neck and os tincæ.

10. That after labor in primipara, if the neck has not been lacerated, the cervix uteri will return, supra and infra vaginal portion, to its natural length very soon, though it may be patulous and soft.

11. That these propositions are also corroborated by cases where the complete separation of the infra vaginal part of the cervix has taken place, and which could not have occurred if the neck was fully obliterated at term (cases of my own in Bellevue hospital); also in cases of excessive œdema of the cervix, where the cervix is one and a half and two inches in length.

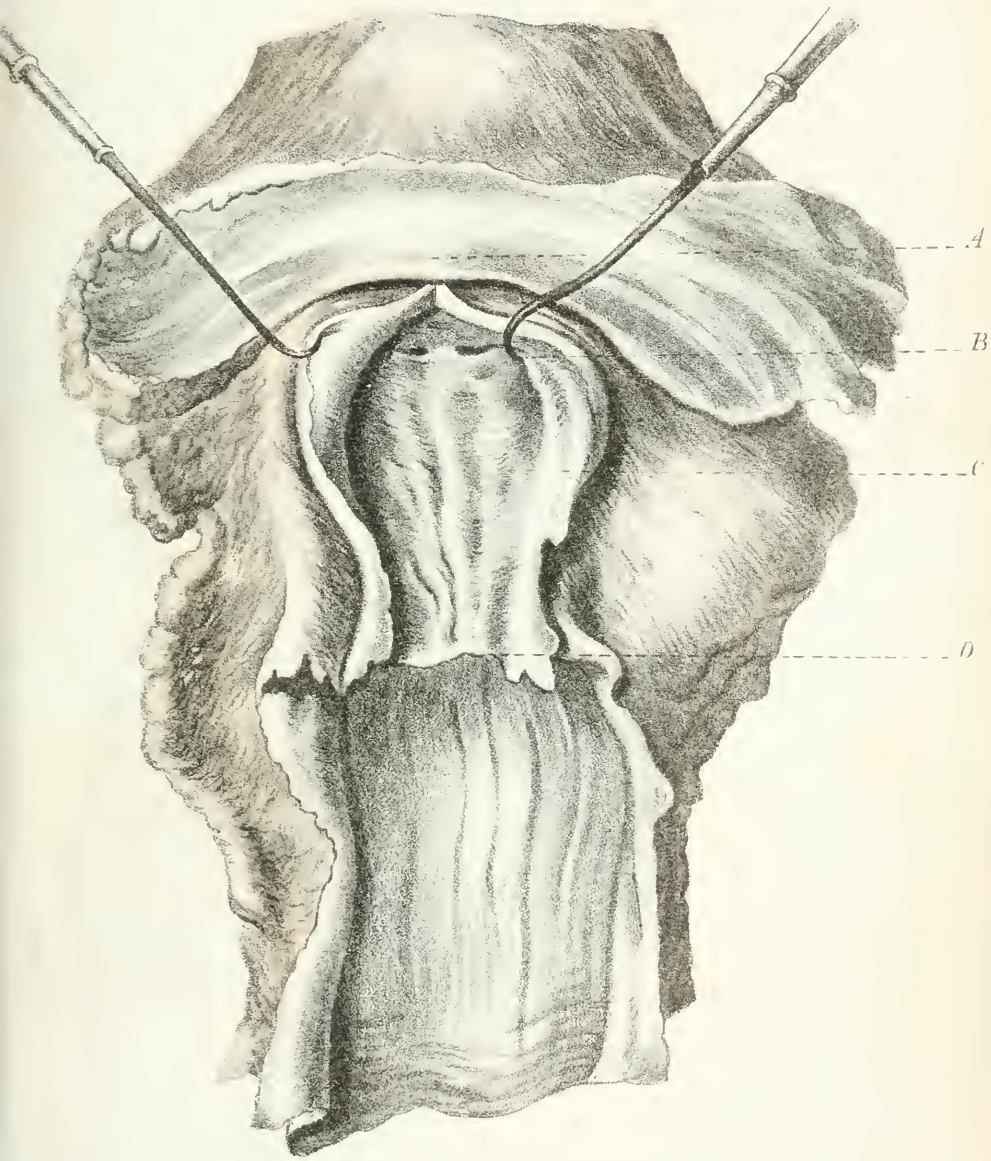
12. That from these investigations, made during life at various periods of pregnancy at full term, and in the first stage of labor, and from post-mortem cases, the cervix uteri does not undergo any shortening or effacement of the supra and vaginal portion, but retains its whole length, and only becomes expanded or dilated at the commencement of labor, the cervix serving only as a channel between the body of the uterus and the vagina; this dilatation accomplished through the combined operation of the softened condition of the neck, and by the descent and pressure of the child's head, through the contractions of the uterus, the internal os uteri commencing first to expand. The expansion thus begun, slowly passes to the external os uteri, and then the cervix is gradually unfolded to its full limit of expansion for the exit of the child; and no more perfect and practical every day illustration can be adduced than the gradual expansion of the *horse's anus* during an evacuation and its contraction after an evacuation occurs. Cases in the hospital have shown these facts during the first stage of labor, while the membranes have been protruded through the os tinca when it was only half an inch in diameter and the cervix long, and the infant delivered soon afterwards.

From these propositions I think it will be perceived that the views I entertain differ essentially from any that have been advanced on the behavior of the cervix uteri in utero gestation.

In the article referred to, I stated that I had exhibited, before the New York Academy of Medicine, a morbid specimen presented to me by Professor C. R. Gilman, taken from a woman who died from

A Body of the Uterus
B. Membrana decidua.
C. Os internum of Cervix. Lenght 1 ½ inch.
D Os tincae.
Primipara 8 Months.

From nature by R. Kohler



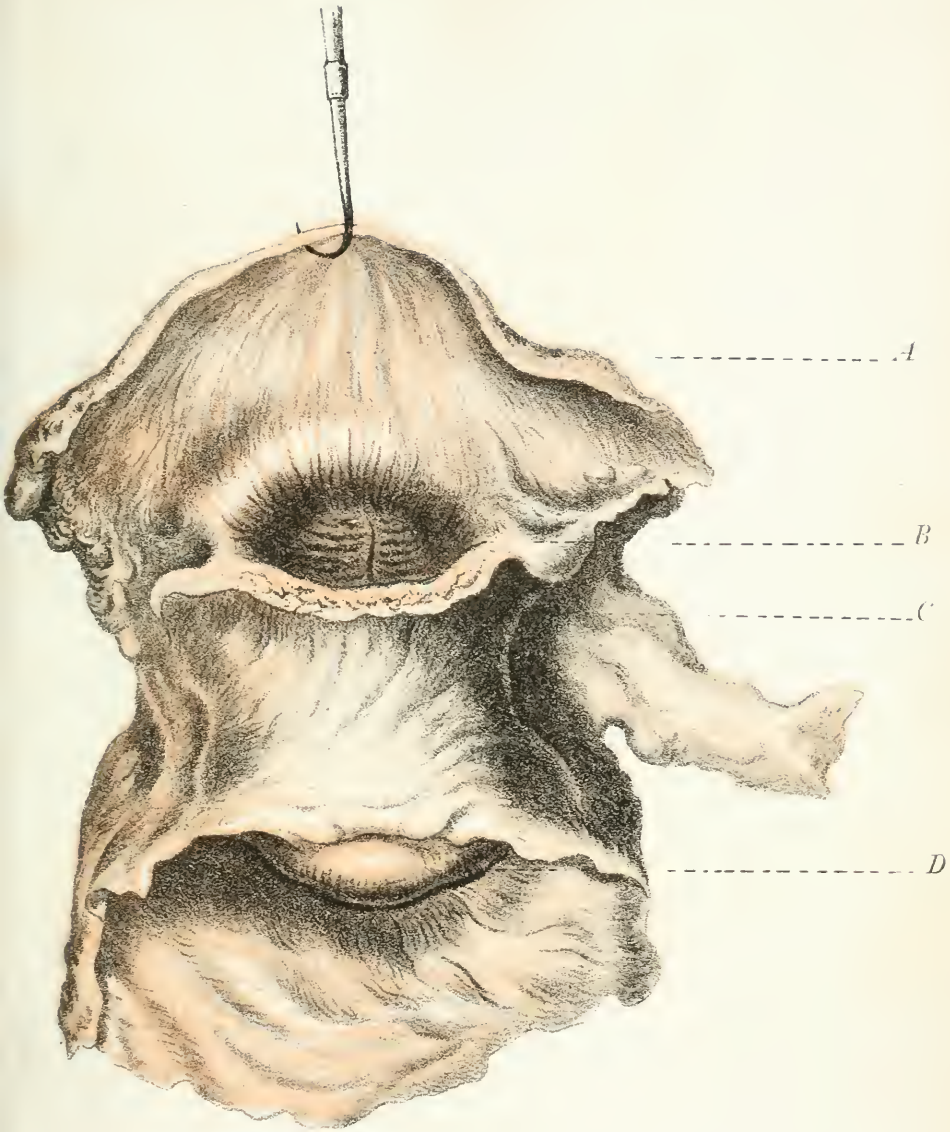
A. Body of the Uterus

B. Os internum

C. Cervix opened

D. Os tincae

From nature by R Köhler



A. Body of Uterus.

B Anterior Portion cut off.

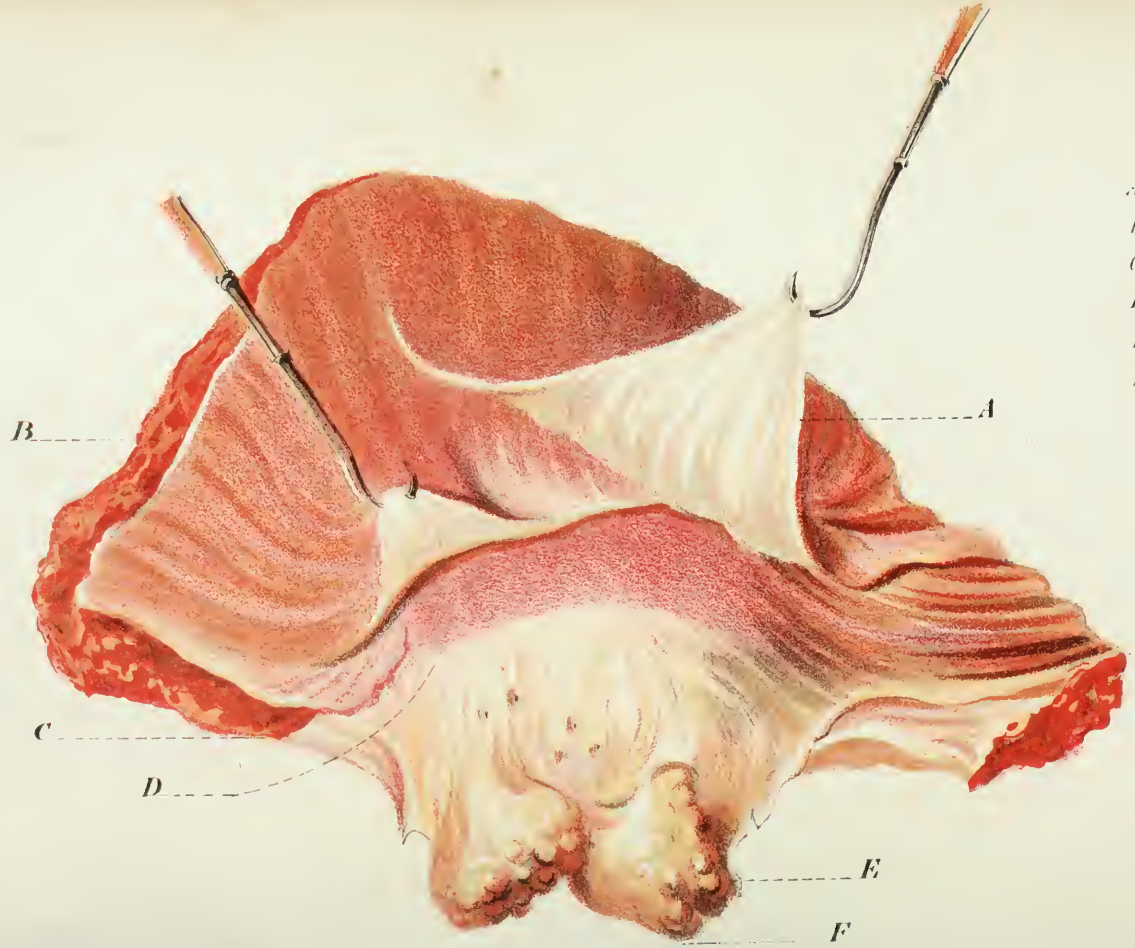
C Internal Os uteri. Lenght 1 1/2 inch Mens.t of Cervix.

D. Anterior Infra Vaginal Portion.

Multipara Uteras 9 Months by actual Measurement.

From nature by R. Kohler.

Plate 4



A. Decidua Reflexa
B. Decidua Vera.
C. Body of the Uterus.
D. Cervix opened laterally
E. Glandulae nabothi
F. Os tincae.

Multipara in Labor
first Stage 6 hours
Foetus 10 pounds

placental apoplexy or concealed hæmorrhage, in the first stage of labor at the full term, and I also showed another specimen taken from a patient who died from post-mortem hæmorrhage, at seven months complete, and where the hand had been introduced to remove the placenta, by one of the house staff in Bellevue hospital, showing the cervix uteri had returned almost immediately afterwards to its natural form and length, which it would not have done so soon after delivery if the cervix had expanded itself into the body of the uterus.

Since the publication of that paper, several post-mortem specimens have come to my notice, three in the year 1864, one at eight months, primipara as per diagram, showing the decidua, vera and reflexa, over the internal os uteri, and the other two in multipara exhibiting the difference in appearance in one of them in its thickness and breadth and large os uteri externum; the last was in a patient who died suddenly after six hours labor, full term, of puerperal convulsions, from uremia: this last specimen—the colored one—is the drawing of the uterus divided laterally, and shows the distinctive anatomical structures that exist in the body and the cervix—the body showing the thick, reddish striated muscular elements, while the cervix uteri, an inch and a quarter long, with its white, fibrous, bloodless tissue, and the longitudinal and lateral folds, with cervical glands well developed; thus demonstrating, even in the first stage of labor, the significant contrast in breadth, length, color and structure, without any expansion or dilatation whatever of the cervix.

As it is possible that my previous paper may not have been seen by a large number of the profession I consider it necessary to offer a few remarks from some of the latest authorities on this subject.

Since 1862 I have examined a very considerable number (880) of pregnant females in the Bellevue hospital and Island hospitals, from eight months to full term, and the first stage of labor, and it only confirms the views expressed in the propositions.

The opinions of Stoltz, adopted by Caseaux, in contrast with the older or more generally received opinion on this subject, I presented to the medical profession, when I edited Dr. Evory Kennedy's work on Obstetrical Auscultation, in 1842, and gave diagrams of the explanation in which I was instructed, by M. Caseaux during my pupilage in 1840, shortly after M. Caseaux became acquainted with the views of Stoltz, and they were the first that was ever given to the medical profession in America on this subject, although in 1840 and subsequently they were taught to pupils attending my private classes at the New York Dispensary, on the diseases of females. It was as early as 1851, I became convinced from post-mortem investigations, that the opinions I received from my preceptor were not, any more correct than the older one, as both theories arrived at the same result

or conclusion, whether the expansion takes place from above downwards, or whether the change occurs at seven months, or the last few weeks in gestation, for both these views rest on the Touch only, and thus the various theories are framed to answer to this method of investigation while those I advance are from ocular demonstration and morbid specimens—all these specimens and diagrams have been exhibited to large classes of students attending the Bellevue hospital college and a number of my professional friends and colleagues. I cite a few passages from Caseaux, Duncan, Donkin, and others, as some have supposed without comprehending the opinions I hold, that they were the same as Stoltz. The 4th conclusion of M. Caseaux is "That the whole length of the neck disappears in the last fortnight, being lost in the cavity of the body; and 5th, it does not shorten from above downwards during the last four months, but the fusion of the neck with the body takes place only within the last few weeks of gestation up to the last two or three weeks developing from below upwards, and that in the last fortnight, the internal orifice softens and yields to distension, then expands from above, so that the upper half of the neck generally becomes confounded with the cavity of the body, the lower part of the ovum will evidently engage in the dilated portion, and soon comes into contact with the parts in the neighborhood of the external orifice."

For several years Dr. Duncan says he has advocated the views of Stoltz and Caseaux, and he has published two articles on the cervix uteri during pregnancy. I desire to refer to his opinions: in the March number for 1859, Edinburgh Monthly Journal Dr. Duncan states his object thus: "My present object is to inculcate the views of Stoltz with some modifications, and especially so to connect them with actual observation anatomically (Dr. D. gives outline diagrams from the 3, 4, 6, 7 and 8 months taken from Coste, Farre, Hunter and his own dissections,) so as to make it imperative on obstetricians to accept them implicitly or reject them by other observations, as completely made." In discussing the subject Dr. Duncan says: "I intentionally omit the latter days of the ninth month of pregnancy for during those days which are included in the full term of utero-gestation, silent and painless labor is often really going on, I mean that contractions of the uterus, usually without pain, are effecting the complete *obliteration of the cervical canal.*" There can be no question from these quotations in the first article of Dr. D., that he arrives at the same conclusions as Stoltz and Caseaux; that there is complete obliteration, "total effacement" of the cervical canal before labor occurs. He is endeavoring to dispel the errors which Stoltz, he says, has the credit of first assaulting.

At a meeting of the Pathological society of New York, February, 1860, the record of which was published in the New York Medical Journal for March, Dr. Thomas presented a specimen of the cervix uteri taken from a patient who died in the seventh month of pregnancy, and after stating the different views that were entertained on the subject, the behavior of the cervix uteri on gestation remarked, "when I first examined the cervix, I was inclined to believe that it went to prove Stoltz's theory to be the correct one, but subsequently making a more thorough investigation, I was forced to the conclusion, that by this specimen, neither of these views were sustained, for the index finger could not be introduced *at all* into the os externum, and it was impossible to touch the fœtus notwithstanding a considerable amount of force was employed; and further the *os internum* was *perfectly distinct*, and the cervix had not *disappeared at all*, but was somewhat increased in length, and a trifle wider, at its upper than lower portion."

My colleague, Dr. B. F. Barker, in a paper published in the Medical Circular, London, April 24, 1861, in an effort to shorten the duration, and diminish the pain of the first stage of labor, says, "during the last fortnight of pregnancy the cervix diminishes very rapidly, opening from above downwards until it is wholly effaced," and to substantiate his views, quotes from M. Cascaux, and thus adopts his theory.

Dr. M. Duncan in his second article published in the September number for 1863, Edinburgh Medical Journal, having changed his opinion, from his researches, as to who should be entitled to the credit of the discovery of the behavior of the cervix in pregnancy, remarks, "that henceforth it will be a grave error to consider the true account of the behavior of the cervix during pregnancy as modern, and as a discovery of Stoltz, rediscovered or confirmed by more recent authors. The credit he gives to Weitbrecht, an anatomist of 1750, who published his memoir "De Utero Muliebris, Observationes Anatomica." From this memoir Dr. D. selects a passage in proof, and states that the diagram which Weitbrecht gives is from a dissection of the uterus of a woman at seven months, and that it greatly resembles the picture of the same part in the Icones of Roederer (Roederer, I would remark being only six months,) and he also gives at the close of the paper a wood cut of the cervix of the uterus of a patient of his own, who died in the Edinburgh Maternity at eight months. Now, how Weitbrecht, as an anatomist, from a drawing of a uterus at seven months pregnancy only, could have the credit of attempting to illustrate or demonstrate the conduct of the cervix in utero gestation up to even eight and a half months, much less to 9 months or from any practical

experience on the subject either by touch or sight, I am unable to conceive, as his remarks show nothing of that nature. Stoltz has by the *toucher*, and by the *toucher* solely, and his practical experience demonstrated, as he believed, and as well Caseaux, that the cervix is not reduced in length till eight and a half months, and Stoltz is fairly entitled to the credit of the discovery, if these opinions and views had been or were sustained, but which we have demonstrated are *not* any more correct than the former view of Goock, Ramsbotham, and others. No, there is no alteration of the cervix uteri during labor, as it remains intact. I think it will appear evident that Weitbrecht has not the slightest claim as a discoverer of the cervical changes during pregnancy, taking precedence of Stoltz in 1826, and to Stoltz belongs the credit of having before any one else, assaulted the former erroneous view, and yet Stoltz himself, as I have proved, is erroneous in his interpretation of the subject, and in response to all this I refer to the propositions as given above. All the late obstetrical authorities who have embraced the views of Stoltz and Caseaux, as well as Dr. Duncan, arrive at the same conclusion, and therefore as the partisans of these views have to explain how in placenta previa, complete or incomplete, but more especially central implantation of the placenta over the os uteri internum, the placenta adapts itself to the cervix uteri from the eighth month to the full term of pregnancy. This now leads me to the special object I propose making some observations upon in the anatomy, physiology, pathology, and treatment of placenta previa centralis, and in doing so, I shall be obliged to quote from the various authorities on those topics, to place the subject in its true and proper light, as there is a great difference of opinion on these points, and hence the various theories that have been broached, and I shall canvass those opinions and leave it to the profession to judge whether correctly or not, founded as my remarks will be on facts from ocular demonstration, on the living and dead subject, and thus not on theory.

Anatomical Views of the Uterus and Cervix Uteri.

Sir C. Bell observes: "I have not succeeded in discovering circular fibres of the os tincæ, corresponding in place and office with the sphincters of hollow muscles."

Dr. W. Hunter. "The cervix uteri where the penniform rugae are situated, has not such regular, nor such fasciculæ as the rest of the uterus."

Dr. Murphy. "The existence of the circular fibres has not been found."

On the other side of the question, the latest and more thoroughly investigated, Cruvielheir says: "The neck of the uterus is composed

entirely of circular fibres, which intersect each other at right angles," and this opinion is corroborated by Jobert, who affirms, "that the uterine neck is formed by fibres which constitute semicircles and decussate without mingling. The semicircular arrangement is more evident in women who have had children, than others," and adds, "that the superficial longitudinal layers in the portion of the body, passes into the posterior surface of the cervix."

Kolliker, after describing these layers of muscular fibres, longitudinal and transverse, of the fundus and body, remarks: "whilst at the thinner cervix, transverse fibres especially intermixed with isolated longitudinal ones, are not within the os uteri externum, and on that part itself, highly developed transverse fibres lie immediately beneath, the mucous membrane may be described as a sphincter or occlusor of it."

Dr. A. Farre. "The cervix uteri cannot be said to consist like the body, of three coats, but consists of a muscular and mucous coat only, on account of the large admixture of fibrous tissue, with the muscular element existing, that might be almost called the fibrous coat of the cervix, the large amount of white fibrous tissue, and the density and compactness of the laminæ here found around the cervical canal, gives to clear sections of this part an appearance of circles conveniently arranged."

Besides these observations of Dr. Farre, I would add, that it may be compared to the contractile fibrous tissue which forms the dartos of the external tunic of the vagina and perineum. In truth the fibrous structure is the principal one that admits of the extension, expansion and elongation of the cervix, and not shortening during its dilatation for the exit of the child, whether through the neck, vagina and vulva, like the horse's anus.

It must be apparent therefore, that the uterus is ranged in the same class as the hollow muscular organs, and which structure is governed by general and fundamental laws of intercrossing, and these intercrossings in the neck give rise to the peculiar duplications of the mucous membrane, and which has been called arbor vitæ, and as the middle layer of the cervix uteri has its peculiar characteristic white fibrous tissue, capable of expansion to a considerable extent, so has nature admirably adapted the internal mucous membrane for its special and important office, from the longitudinal and lateral reduplications from the great sulca or fossæ, which become unfolded by the expansion of the cervix during labor, to the extent of from one and a half inches in length and breadth, to three inches in length and twelve or fourteen inches in breadth or circumference, as the limit of the child's head or the diameter of the pelvis, and can go no

further, and this expansion or dilation is accomplished at full term of labor and only at that time, and not before that important event is decreed, developing its expansibility, capacity, and contractility of tissue solely.

I have been minute on this anatomical and histological part of the subject, as Dr. R. Barnes in his Lettsomian Lectures, on the Physiology and Treatment of Placenta Previa has, to illustrate his new physiological views, theory and treatment, adopted and based his anatomical opinions on those of Sir C. Bell, on the uterus and its physiological action. The work of Dr. Barnes on Placenta Previa, with some observations of Dr. A. Donkin, of New Castle on Tyne, on the same subject, published in the Edinburgh Medical Journal for 1859 and 1863, are the latest productions for the consideration of the profession. I shall be pardoned for quoting the whole passage taken from C. Bell, as I do not desire to misinterpret or misquote the remarks of Dr. Barnes. I shall take the quotation from Dr. B., but originally published in the Medico-Chirurgical Transactions. Sir C. Bell says: "It has been proved by the sections of the uterus, made at different states of its contractions, that the order of the muscular fibres is calculated so to close the vessels, that when nature has provided for the attachment of the placenta, then the broken vessels are guarded by the provisions of the surrounding muscular texture; but we know also that during this contraction of the superior part of the womb, the lower part dilates and relaxes. Now if the contractions of the womb be essential to the safety of the mother, what will be the effect of the attachment of the placenta to a part of the womb which must relax during the labor. Every one knows the peculiar danger of placenta previa, that each labor pain's return, increases the violence of the flooding instead of checking it. I have been led to conclude that the placenta cannot be partially separated, if it be attached in a regular circle to the fundus of the uterus; it cannot be partially separated and cannot be bodily separated until the uterus is permitted to have a great degree of contraction by the delivery of the child; the circular muscles of the fundus being agents in a double capacity, that is, both in expelling the child, and in constringing the uterine vessels, by the time the child is expelled, the vessels of the fundus are greatly diminished in diameter. Further, the place and strength of these vessels being perfectly uniform and regular, their action must have the effect of equally drawing the surface of the uterus, which is in correspondence with the margin of the placenta. But no one part of it will be separated until the general retraction is nearly completed. This will not be the case when the margin of the placenta extends irregularly, or when the placenta is attached to

the side of the uterus. After the delivery of the child in cases of flowing, it is not uncommon to find a portion of the placenta low down in the uterus, and separated, while the greater part remains attached to the fundus. In examining the inner surface of the uterus by dissection, I have seen the part corresponding with the placenta, irregular in its form, and extending towards the side and neck of the uterus.

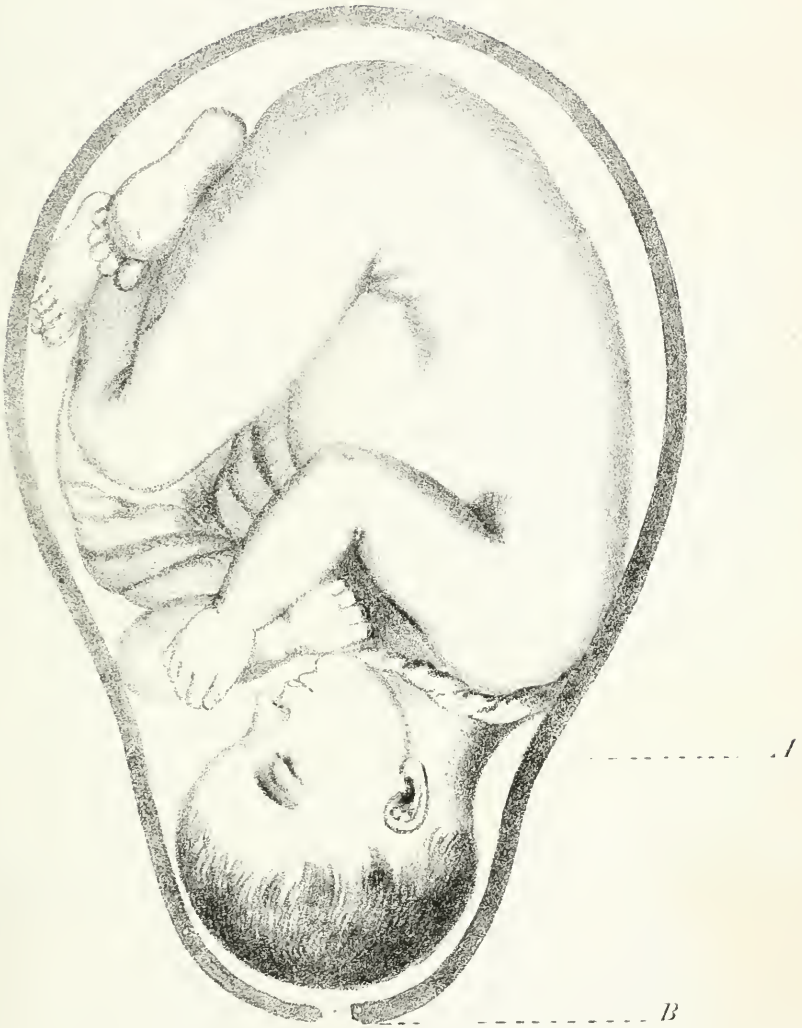
In such circumstances of the attachment of the placenta, the retraction on the lower part of the womb, being to a greater extent than the fundus, will account for the too early separation of that margin of the placenta which stretches towards that orifice, and also for the hæmorrhage which is a consequence of this partial separation. But in progress of the labor, and after the discharge of the waters, the more powerful efforts of the uterus, draw the muscular fibres more closely around the blood vessels, and the flooding ceases." Dr. Barnes says: "I am entitled to rest the anatomical foundation of my views upon his authority," and then proceeds to illustrate his own views with diagrams as follows: "The inner surface of the womb may be divided into three zones or regions, by two latitudinal circles. The inner circles may be called the upper polar circles. Above it is the fundus of the uterus. This is the seat of fundal placenta, the most natural position. It is the zone or region of safe attachment. The lower polar circle is the lower polar circle. It divides the cervical zone or region, from the meridional zone. The space comprised between the two circles, is the region of lateral placenta. When attached to this region, the placenta is not liable to previous detachment. Below this circle is the cervical zone, the region of dangerous placental attachment. All the placenta fixed here, whether it consists of a flap overreaching downwards from the meridional zone, or whether it be the entire placenta, is liable to previous detachment. The mouth of the womb must be *pulled* open to give passage to the head. This enormous contraction or retraction of the *longitudinal* fibres is incompatible with the preservation of the adhesion of the placenta, which is within its scope. In every other part of the womb, there is an easy relation between the contractile limits of the muscular structure, and that of the cohering placenta; with the cervical region this relation is lost. The lower polar circle is then the physiological line of demarcation between previal and lateral placenta. It is the *boundary line* between which you have spontaneous placental detachment and hæmorrhage—above which spontaneous placental detachment and hæmorrhage cease."

The extent of this polar circle is by Dr. Barnes described as a circular line, three inches distant in all parts, from the os uteri, (os

tincæ,) and is then twelve to fourteen inches in circumference. In the diagrams of Dr. Simpson and Dr. Tyler Smith, on the attitudes of the fœtus, the same view is given and opinion entertained, the os uteri internum being expanded to twelve or fourteen inches, and the os tincæ closed. Dr. Simpson after giving a description of a pregnant uterus, belonging to Professor Goodsir, at full term, says: "across the cervix, about three inches above the os, it is four inches in breadth, in circumference twelve to fourteen inches." Dr. Tyler Smith, "in the fœtus, one oval is formed by the head, and the other by the body and limbs of the child. These parts correspond with the two ovals into which the *developed cervix*, and developed body of the uterus may be divided," and still later the opinion of Dr. Donkin, April No. 1859, Edinburgh Medical Journal, in his article on the Pathology and Treatment of Placenta Previa: "in speaking of the nature of cervical shortening, and the cause by which it is produced, we will find that it is merely the sequence and result of the gradual dilatation of the walls of the cervix, and the amplification of its cavity." In other words, Dr. Donkin, says: "it is neither more nor less from beginning to end, the *first stage* of that passive expansion which the cervix undergoes during the first stage of labor."

Not one of the several specimens of post-mortem investigations that I have seen, (numbering twelve,) was the cervix expanded, but were as natural in length, but broader and softer than natural. Now according to Dr. Barnes, assuming that the detachment is limited to this extent, of the placenta, how is the hæmorrhage from this surface restrained, or bleeding checked? and he informs us thus: "by precisely the same mechanism as that which stops the flooding after normal detachment of the placenta from its normal seat at the fundus. The longitudinal fibres of the lower cervical segment, must contract to *pull open* the mouth. Expansion, dilatation of the mouth, is contraction of the cervix. This, contraction by shortening the cervical portion of the womb, casts off the placenta, and exposes the ruptured mouths of the utero-placental vessels. The first effect is bleeding. The second is to stop the hæmorrhage." Dr. Barnes goes on to remark: "that zone after zone is bared by recurring contractions and successfully sealed up until its physiological limit, that line of demarkation between normal and abnormal placental detachment which *I claim* to have discovered, has been reached. This zone attained, the labor is a natural one." I believe this gives a correct transcript from Dr. Barnes, of his views on the anatomy, physiology and treatment of placenta previa, and before entering on any comments on them, I shall merely refer to the remarks of Dr. Donkin, where he differs from Dr. Barnes on the subject of "expansion, dila-

Plate 5

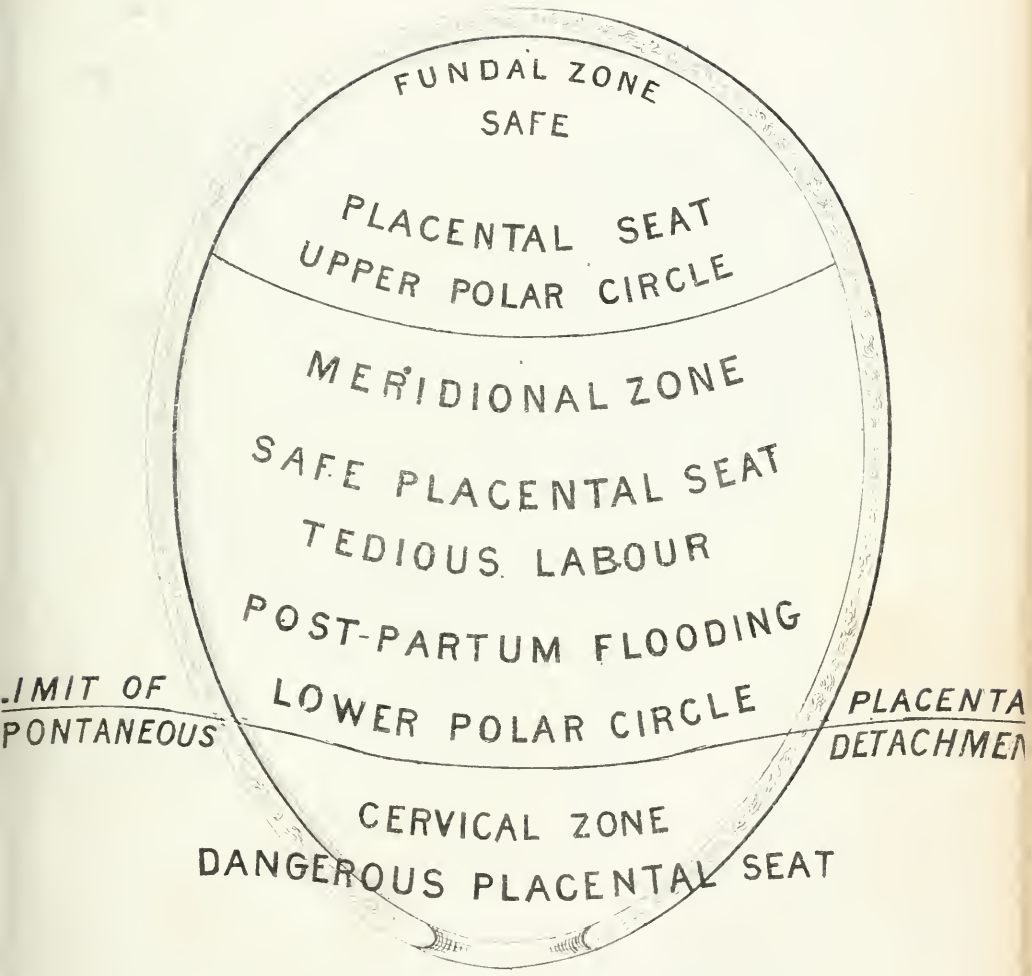


A. Os Internum

B. Os Tincæ

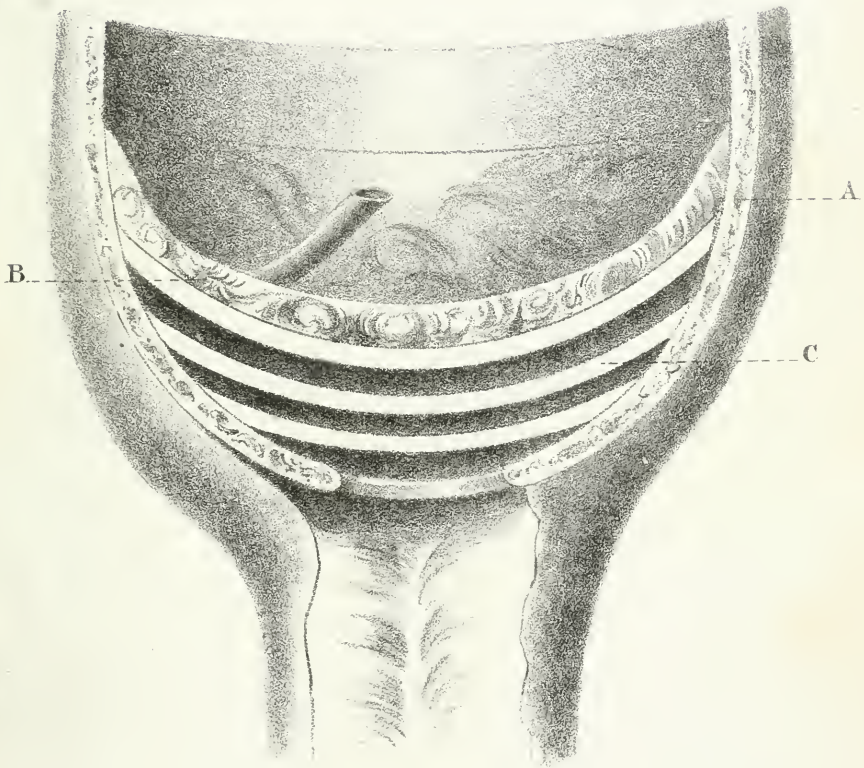
From Simpson & T. Smith's Plates

R. Kohler, Lith.


FUNDAL ZONE
SAFE
PLACENTAL SEAT
UPPER POLAR CIRCLE
MERIDIONAL ZONE
SAFE PLACENTAL SEAT
TEDIOUS LABOUR
POST-PARTUM FLOODING
LOWER POLAR CIRCLE
CERVICAL ZONE
DANGEROUS PLACENTAL SEAT
PONTANEOUS
PLACENTA
DETACHMEN

BARNES PLATES.

Fig 8.



A. Body of the Uterus. B. Zone of safe Attachment.
C. Cervix Placenta separated.

tion of the mouth of the uterus is contraction of the cervix," Dr. Donkin considering the cervix when expanded during gestation and the two cavities becoming blended perfectly with each other, yet the cervix does not lose its histological character, and is only passive during labor, and does not contract like the body of the uterus.

I think it is evident from the opinions of the celebrated anatomists, Cruveilheir, Jobert, Farre, and especially Kolliker whom I have quoted, and from the diagrams of specimens from post mortem examinations, taken by (my artist) M. Kohler, that the anatomical and physiological opinions and views of Dr. Barnes are incorrect, and the treatment based on such views cannot be substantiated to embrace a practical application. The Dr. appeals from authority to observation, and "claims to have developed the *true* theory, the *true* physiology of placental presentations, and thus to have supplied a scientific clue in the treatment of flooding from unnatural position of the placenta." For myself I appeal to close observed facts, from ocular demonstration, both on the living and dead subject to the very terminus of pregnancy, and during labor. Beyond this it is apparent we cannot go, and the various theories must bend to facts, not speculative in the mutation of events. The object to subserve is truth. Truth in its unvarnished and beautiful simplicity, divested of all theoretical views to square and adapt itself with supposed true physiological views, and I ask a thorough and candid and careful clinical investigation to prove or disprove them, in the manner I have sought to accomplish from an extensive experience and opportunities for the benefit of our profession and humanity.

At this period of my remarks I must take the liberty of remarking that there is no evidence from the cases given by Dr. Barnes in his work to illustrate his theory and method of treatment, being placenta previa centralis at all, except case 10, appendix, for they may be considered as simply cases of placenta lateralis, and where the placenta came down to the edge or nearly or partly over the os uteri internum, when expanded according to his diagrams. It is in central implantation that there is the most difficulty and danger, and where at least in the large majority of cases, the labor could not merge into a natural one, even if the flooding was stopped by Dr. Barnes' method: As case 10, and case 33, Obstetrical Transactions, Vol. 1, negative the Dr.'s views, as hæmorrhage occurred after the separation had been completed, and unless experience of cases of central implantation can be adduced, and not partial lateral cases, the true boundary line, the true theory, the true physiology cannot be demonstrated, but the method of Dr. Cohen, of lateral separation partialis instead of Dr. Barnes'.

The manner of explanation of Dr. Barnes is *similar* to the views of Dr. Murphy, although Dr. Murphy holds that the natural means of arresting unavoidable flooding is the separation of the placenta from the cervix uteri, and then the uterine contractions sustain the arrest and the labor progresses, for without the separation, as Dr. Simpson has proved, the hæmorrhage would have continued. Dr. Murphy says: "That dilatation of the os uteri is in fact the contraction of the cervix," and then goes on to explain what contractility of the cervix is.

Dr. Barnes holds, "that expansion, dilatation, is contraction of the cervix, and that the separation however is not the cause of the arrest, but the contraction of the womb."

There is therefore this material and important difference between the opinions of Dr. Barnes, Murphy, Donkin, and others, and myself, that they consider the cervix uteri expanded. Dr. Murphy and Dr. Barnes believing the contraction of the cervix, as expansion, dilatation of the cervix is contraction of the cervix, and the placenta is cast off. Dr. Donkin, that the cervix is passive; whilst my own opinion, that there is no expansion, and the cervix is at rest entirely during utero gestation and labor, and is only a passage or channel for the child, or both at the same time. Well and truly has the celebrated and acknowledged physiologist, A. Kolliker, in his manual on Human Histology, remarked, "that in the act of parturition, the cervix and the *os uteri are at rest*, whilst the fundus and body contract, the contractions of the former part, cervix and os uteri and the vagina, not ensuing till subsequently:" but on this point, the passive contractions of sphincters, Todd and Bowman in the Cyclopedia of Anatomy and Physiology, page 191, vol. 1, say, "when the excretions at length excite the contractions in the walls of the cavity containing them, this overcomes the passive contractions of the sphincters, and evacuation occurs." No, the cervix is at rest, before and during parturition and only unfolded for the exit of the child, and by its natural contractility closes afterwards, and I might add, although Dr. Barnes holds a different opinion, that even Sir C. Bell admits this point; also, he says, from the quotation I have made, "that during the contraction of the superior part of the womb, the lower part dilates and relaxes."

SPECIAL CAUSES OF THE HÆMORRHAGES.

There are several different propositions entertained to explain the cause of the hæmorrhage.

1. That of the mechanical school, Gouch, Dewees, and others, and Dr. Barnes, adds, "the increased irritability of the os uteri independent of spasmodic action."

2. That of M. Caseaux, which is a want of corresponding growth in the placenta and the uterus at the point of attachment, thereby inducing separation."

3. That of M. Velpeau, "who thinks that the growth of the placenta and the uterus at their point of contact is equal, and attributes the hæmhorrhage at eight months, to the rapid dilatation of the os uteri, and that a portion is detached from the uterus and thus ruptured. That this creates a congestion of the womb in that region, and that the general efficient cause is added to the special cause, which creates the flooding."

4. That of Jacquemin, who attributes it to a double cause, unequal growth and development, and mechanical distention.

5. That of Dr. Read, of Boston, in his invaluable work on the History of Placenta Previa.

"The attachment of the placenta to any portion of the uterus causes a development at that place, which proceeds pari-passu till the limits of growth in the placenta having been reached, the enlargement is continued, and kept up by the pressure constantly exerted on the uterine walls by the growing contents, till the time of parturition."

I shall more particularly refer to the opinions of Caseaux, Jacquemin and Read, as illustrating this point, and then advance my own from the facts I have presented.

Caseaux, page 685, ed. 1863. "But when the afterbirth is inserted over the cervix, the growth of the placenta is nearly completed, whilst a more considerable expansion of the lower third of the womb has yet to take place;" and further, "by it we can also comprehend the possibility of a circumstance that is inexplicable under the theory generally received. I allude to the hæmorrhage when the placenta is attached to the lower third of the womb, or some part adjacent to the internal orifice, for it is not because the afterbirth is implanted over the cervix that a flooding takes place during the latter months of pregnancy, but because it is related with the inferior third of the uterus." The explanation is true only with regard to those sanguineous discharges that come on in the latter weeks of gestation or during parturition, for then the spreading out of the cervix and its complete effacement must necessarily have a great influence over the production and profuseness of the flooding in those cases where some parts of the circumferencé of the placenta is in relation with the neck.

Dr. Miller, of Lexington, Ky., adopting Caseaux's views of the shortening of the neck, remarks, page 243, on this point; "That when it, the placenta, is inserted on the neck or over, the maternal

placenta cannot follow the rapidly expanding parietes of the uterus, and hence the stretching, and rupture of the utero placental vessels, and the unavoidable production of the hæmorrhage," and from this explanation it appears that whether we suppose that the placenta is attached to the interior of the cervix or to the inferior part of the pyramidal body of the uterus, the mechanism is the same. In either case the development of the uterine portion taking place more rapidly than the placenta can follow, causes a separation of the maternal from the fœtal tissues, rupture of the connecting vessels and hæmorrhage, are the inevitable consequence."

Jacquemin; "That it is the rapidity of the development of the inferior segment of the body of the uterus and the mechanical distention during the last months of pregnancy which makes its demand in a short space of time so deeply in the pelvic cavity, particularly when the head of the fœtus presents, constituting the ordinary cause of hæmorrhage up to a period very near the end of gestation, and that in these cases in which, after the hæmorrhage has come on, it ceases, and does not return before delivery, the result is owing to the fact, that the distention has relieved by this separation, and the edge of the placenta removed from the internal os, by the gradual approximation of the external os, or at the time when the distinction between the os internum and external os has disappeared," which according to M. Jacquemin, is between eight to eight and a half months. Dr. W. Read remarks on his proposition: "Now, if we supposed the development to commence at the place where the placenta attaches itself at the lowest part of the cervical portion of the uterus, at the very os for instance, and keep pace with the growth of that organ, *i. e.*, placenta, the difficulty in a great measure disappears, for in these cases where complete presentation exists by the time when the placenta ceases to grow, the synchronous development of the cervical part and the placenta may have obliterated the distinction between the internal os and the external os, and thus have anticipated the changes which, under a normal arrangement, would be going on at that place during the last months of pregnancy," and refers for an explanation to case 50, table 1, which I find is a case reported by my brother, Dr. O. H. Taylor, Camden, N. J., Boston Medical Journal and Medical Reporter, New Jersey, 1853: Dr. R. remarks on it, "hæmorrhage in this case did not occur till about the time when the internal os, according to Jacquemin, begins to open, eight and a half months."

Now all these theories are mechanical—they all admit the separation of the uterus from the placenta, and then opinions are framed in consonance with the view of expansion of the neck, whether com-

mencing at the seventh month from above downwards, or at the eighth to eight and a half months, rapidly according to Caseaux, Jacquemin and others, and as no further evidence since the opinions of Stoltz have been presented, of whether the cervix expands or not during gestation, the profession accept and adopt these views, and have of course taken for granted they were correct. Now, from the facts of the nature I offer to the profession, and which are of so clear and demonstrative a nature and character, some other explanation must be given to explain the manner in which the hæmorrhage occurs, or its special cause.

I think it is patent, that the development of the womb may commence at any part of it, and go on "not according to any arbitrary laws, but in connection with the increasing growth of the ovum, and its obedience to ordinary physiological laws," for who is there of us can tell how the bones of the child do grow in the womb, and as this question cannot be answered, no more can we determine the exact point of departure of growth of that organ when conception occurs and expands in the manner of its growth, and hence theories have arisen and culminated for awhile, then they are forgotten or changed by the authors of them, without having advanced science in one essential point or benefit.

From the evidence I have adduced from my investigations, we must bear in mind the peculiar connection of the placenta to the maternal structures, and also the structure of the placenta, being such as to admit of its expansion, and contraction, without breaking those in connection with the uterus, and the softened condition of the parietes; the delicacy of the intervening spaces of the cotyledons; the great vascular condition of the placenta, composed entirely of maternal and fœtal blood vessels, in close proximity, and dovetailing into each other; the exceedingly great tenuity of only a single diaphanous membrane, and the large reticular tissue or lacunæ of that organ, in truth nothing but blood; the slowness with which the blood moves through the curling arteries, and the quantity that exists there for the special function of sustaining the child, before its passing into the venous sinuses; the abnormal position of the organ, its complete inversion; the oblique and upward course of the bloodvessels, the weight of the child; although the placenta may yield in its expansion or stretching, whether its head or breach present; the enlarged and dilated sinuses, and, in many cases, the varicose condition of the lower part of the body of the uterus, (not the cervix especially;) the physiological congestion of the whole uterus, also the general activity of the circulation through various sources and circumstances; the hæmorrhagic tendency in many pregnant females; the upright posi-

tion of the female in standing or walking; and as Hunter's plates in this point show the compression of the organ, I think it must appear evident that it would be more singular that some exhalation from these delicate fibrils should not take place, or even rupture of some of the capillaries, and thus as coagulation would follow, the coagula creating an interruption to the regular circulation of the placenta, further hæmorrhage is likely to ensue, and finally a greater flooding, and larger coagula; uterine contractions commence, and a separation of some part ensues, and then a profuse and dangerous hæmorrhage follows, whether this occurs at the seventh or eighth or ninth month. I find that out of 543 cases, there are more reach the full term of gestation, than previous months; 222 from the ninth to full term; 164 at eighth months, and only 109 at seventh month, and 48 at sixth month, and that out of 537 cases, 330 cases were complete, and only 207 partial; and with the evidence before me, I think there is a more satisfactory opinion of what the special cause is, than any of the theories that have been advanced, to square with the expansion of the neck during pregnancy, whether it be from above below, or below upwards, gradually or rapidly—for we would still be framing theory upon theory to account for it, according to the imagination of physiological or mechanical truths, and resting on the toucher only as the basis of these theories.

SOURCE OF THE HÆMORRHAGE.

On this point I have to refer to three theories entertained by the profession.

1. Those who hold to the opinion that the flooding comes from the placenta—Hamilton and Simpson.

2. When the flooding proceeds from the uterus.

3. When the flooding takes place from the placenta and uterus.

On this part of the subject of my paper. I desire to be as practical, as curt as my observations and investigations will admit of.

Dr. R. E. Bland, observes in his remarks, taken from the essay of Dr. Trask, on the Statistics of the Placenta Previa: "Whenever I placed my fingers upon the placenta, and gradually, and freely pressed upon the parietes of the uterus, from which it was separated, I completely arrested the discharge. For some half hour the hæmorrhage was completely controlled by these means."

Dr. Legroux, in a case attended by him, in May, 1847, says: "In exploring the orifice, with the finger carried as high as possible to the left, between the internal face of the neck, and the placenta detached on this side only, I found the following facts: during the diastole, the finger easily penetrated between the separated portions,

but at that time, the blood poured out by its side into the vagina. During the systole, the finger was driven out by the membranes, distended and closely applied and pressed against the internal surface of the neck, the blood ceased to flow, but what had been poured into the vagina during the diastole, was expressed by the pressure of the womb." From my investigations, I propose advancing a step farther than Dr. Bland or Legroux, and relate the following, taken from a record of a case that occurred during my service, in December, 1861, in Bellevue hospital :

A. M., aged 34 years, nine months pregnant, born in Germany, was taken in labor December 29th, seven A. M. Duration of the first stage forty-one and a half hours, second stage four hours, third stage not complete. (This patient was one of the number stated in my former article.) History. The patient was first seen at nine A. M., December 29, by the House Physician, on duty in the obstetrical ward. She was in very good condition—pulse 80—respiration 11. Abdomen noticed to be very protuberant, and abnormal in shape. The long diameter extending from near the ensiform cartilage to the symphisis pubis, while the transverse was very much diminished. On making a vaginal examination, it was noticed the patient was losing a considerable amount of blood. The hæmorrhage it appears had lasted since the night before, but in a moderate degree. In the vagina was found quite large clots. These being removed, and the finger introduced into the os tincæ, it was thought that the placenta presented. As the hæmorrhage was not very excessive, it was considered advisable for fear of more blood being lost, to tampon. The pains up to this time, eleven P. M., December 29, were slight and irregular. Dr. Isaac E. Taylor now saw the patient, and on careful examination recognized a soft and somewhat yielding mass, covering the os uteri internum, which with the previous hæmorrhage, and the increased flow, led to the diagnosis of placenta previa, but whether at that time complete or partial—as the cervix was not obliterated. Continued treatment. Tampon, and watched the case closely. The patient went on without much change, but slight flooding, till eleven A. M., December 30, when Dr. Taylor saw her again. Os tincæ opened size of a dollar. Head of child felt—to the right side membranes filled, and presenting—placenta attached left side. Membranes tapped—liquor amnii passed, and the uterus assumed a more natural appearance. Rupturing the membrane did not have the desired effect, till afternoon, when the placenta was separated laterally, by the contractions of the uterus, and on examination protruding slightly through the os tincæ. On examination by the speculum, placenta was seen on the left side ; the bleeding noticed coming from

the *uterine side*, and *not* from the placenta, though it was partly over the instrument of the largest size, and during the relaxation of the uterus. The pains continued feeble, though regular, and not much hæmorrhage. Head presenting and filling up the cervix, until about seven P. M. She became somewhat restless, and at nine P. M., had a pulse of over 90, of an irritable character, and weak. Dr. Taylor was again summoned and arrived at eleven P. M., and finding the patient in the condition above described, ordered an infusion of ergot. The effect being to increase the duration and strength of the pains, and then delivered her by the forceps, and as the head passed the perineum, the patient sank, the pulse ceased, a single gasp, and the patient died just as the body of the child was delivered. Diagnosis—air in the veins."

Autopsy two P. M., December 31, in the presence of the class. Rigor mortis complete, abdomen much distended with gas, and slight effusion of serum in the peritoneum. On removing the uterus, found the placenta attached to the left side, about the lower third, the lower portion projecting in the cervix to the os tincæ—body in an emphysematous state, and right ventricle distended with air.

This is an additional evidence of a more tangible nature than either Dr. Legroux or Bland. The patient lost very little blood after the membrane was ruptured, and as the head of the child blocked up the vessels and tamponed the placenta, it was decided that nature would possibly accomplish her work. Had I been called earlier I should have delivered with the forceps. There was no difficulty in the application of them, and if the untoward circumstance of the air passing into the veins had not taken place, the patient might have recovered. The interval of time between my former visit and delivery was twelve hours.

In the article referred by Dr. Legroux "he has become convinced that the flow of blood from the vessels—the true hæmorrhage, was diastolic, that the discharge of blood from the vulva, apparent hæmorrhage, was indeed *systolic*, but coincident with the cessation of the actual hæmorrhage. The cessation of the hæmorrhage was the manifest result of the uterine contraction, of the tension of the membranes forcibly applied to the internal surface of the neck."

With the case I have cited, as well that of M. Legroux by the touch, it will be apparent that contraction of the uterus suspends the flooding, and that during the relaxation of the uterus, the hæmorrhage takes place. The force of the contractions of the womb drives the presenting part of the child and especially if the cephalic part presents, against the upper portion of the cervix, pushes the placenta aside, gradually obstructs and expands the cervix, puts it upon the

uttermost limit of its expansion, so that (as the placenta was not in the cervix originally,) the blood vessels coursing through can no longer be filled with blood during its expanse by the head of the child, and thus express from the placenta the clotted or coagulated blood, and arrests its flow into it, and after contraction, the dyastole or relaxation takes place, the cervix uteri, and the body of the uterus relaxes, the vessels are again filled up, and the hæmorrhage ceases.

Dr. Simpson entertaining the opinion that the flooding proceeds from the placenta, holds this language: "That the blood issues principally if not entirely, from the uncontracted and uncontractable maternal orifices, that belong to the external surface of the separated portion of the organ, and that the maternal blood is supplied more or less freely to these orifices, in consequence of the free communication existing among the different maternal cells, and from these cells being kept filled with blood, through the utero-placental vessels of that part of the placental mass, which continues to remain fixed, and attached to the uterus," and on these views argues "that if in placenta previa, the hæmorrhage proceeded from the vascular organ, laid open in the *interior* of the *uterus*, it ought to be *diminished*, and not increased in quantity, during the pains, as these vessels would be necessarily, but temporarily diminished under the contraction of the uterine tissues."

Now the case I have presented from actual observation, that the blood was seen to issue during the diastole, and the blood which passed from the commencement of the uterine contraction to its terminus, was the blood which remains and fills up the reticulate texture or lacunæ, and pressed out by the head of the child—and during the compression by the presenting part, causing the placenta to be furthur separated, and during this compression of the placenta and vessels of the uterus, and the contraction of the uterus—the venous sinuses retract, caused by the longitudinal muscular elements in them, with the colossal fibre cells, as described by Kolliker, and the further closure by the oblique falciform projections, consequent on the separation—the blood does not flow into the placenta freely—but passes outwards during the diastole of the womb.

The credit is due Mr. Legroux for the practical suggestion that the *true hæmorrhage* was diastolic—that the first hæmorrhage was systolic, and which my observations confirm by the sight.

But further corroborative proof can be given, and which many of my professional brethren have seen in some of the patients examined during the first stage of labor. The membranes projected into the speculum during the systole, an inch long and through the neck, and

that after the systole, the membranes would recede, and the cervix return into the instrument again—and in some instances of supposed placenta previa, on account of the flooding, by the house physician—(refer to my former paper) the examination would reveal a varicose condition of the cervix, independent of the body of the uterus, when the bleeding could be seen percolating through the distended and enlarged vessels without rupture, as the cervix was not yet developed, and therefore could not be pressed upon by the head of the child. Cases of this nature which I have observed, (case 5 and 6, former article,) verify practically, the supposed cases which occur, of cervical hematocele of the cervix uteri.

Different opinions have also been expressed where the separation of the placenta in complete presentation takes place, whether at the os uteri, at the centre, or at the edge. The doubt must be removed when such facts as I have presented are recognized. It could occur at no other place or point, than the centre, as the os uteri internum is the first to yield, and not the os tincæ, as Caseaux, Barnes, Simpson, and others believe. But Dr. Donkin, with Dr. Ramsbotham, think otherwise, for Dr. Donkin, holds the opinion that the expansion of the cervix is really the first stage of labor, on page 894, in his article on the Pathology and Treatment of Placenta Previa, says: "And if the cervix expands as I have endeavored to show, not only before, but during labor, from above downward, it follows that the detachment of the placenta must follow the same course. It must therefore commence at the upper portion of the cervix, and by the agency of each succeeding uterine contraction, travel downwards. When the placenta is centrally attached, its severance will proceed from its *margin* downwards, to its centre." The facts observed need no comment, and I shall pursue this point no further. I propose now entering upon the different methods of treatment, existing before the profession, for their adoption or rejection.

Treatment.

Four methods seem to claim the consideration of the profession.

1. The more usual, and I may say the generally received method, that of version, tamponing and rupturing the membranes as soon as it is deemed possible to be accomplished.

2. That of Dr. Simpson, who recommends "the total detachment or separation of the placenta under certain circumstances, in place of version," from the cervix uteri.

3. That of Dr. R. Barnes, the latest method, "To separate all that part of the placenta which adheres within the cervical zone or region of dangerous placental seat," and is therefore favorable under

the precise circumstances which preclude turning or total detachment.

4. That of Dr. Cohen, of Hamburg, which consists in detaching a segment of the placenta, which adheres on one side of the cervix, converting a central into a lateral placenta, in these cases where the symptoms are too urgent to warrant trusting to the efforts of nature.

I shall reserve the first method of treatment, to make some remarks upon, grounded on the facts I have offered to the profession, and shall therefore touch upon the proposition of Dr. Simpson first. The total detachment of the placenta from the cervical canal, as Dr. Simpson terms it, but which I have demonstrated never, either physiologically or mechanically, ever existed in that canal by the growth of the uterus, as the body of the uterus and the cervix are totally distinct in character, anatomically and physiologically, though in union with each other.

From a large number of cases given by Drs. Read and Trask, and Professor Simpson himself, and the individual opinions of many prominent obstetricians, Dr. Waller amongst others, the separation of the placenta artificially or spontaneously, but particularly artificially, it has been recognized and proved, that there was flooding as a general rule after the separation of the whole placenta, and thus time was gained in the cases of extreme exhaustion before turning was resorted to, and the mother spared. The propositions of Dr. Simpson have not been I think fully appreciated by the profession, for it is generally believed that his treatment was to be applicable in nearly all cases where turning might be or had been adopted, except transverse presentations, and I think by none more so than by Dr. Barnes in his writings. Now Dr. Simpson expressly states that he submits to his obstetrical brother, "only an *additional* principle, and that cases occur in practice in which neither the artificial rupture of the liquor amnii are suitable, and where forced delivery by turning is inapplicable; and further that there are very many cases of placental presentations, in which artificial delivery or turning of the fœtus will still remain as the most proper and legitimate plan of treatment."

Dr. Simpson's method is applicable, when the recognized modes of treatment were insufficient or unsafe, or altogether impossible of application, and are particularly suitable in great emergencies of extreme exhaustion, where to turn and deliver would prove the death of the mother, instead of saving her. He has therefore established a great physiological fact by experience of a large number of cases from numerous authors, and which I can testify to, that the separation of the placenta from the lower part of the uterus, does arrest

the flooding, when it has been resorted to. The facts, and the evidence that have been presented to the profession, where a just appreciation of his views has been entertained, cannot well be gainsaid by dogmatism when statistics are rejected. I do not desire to be the special advocate of Dr. Simpson's views, but I think an important principle of treatment has been enunciated, applicable to certain cases only, that imperatively claims the attention of the obstetrician in the responsible position he holds to his patient, a principle I believe without it is adopted in some cases, would have lost valuable life or lives. Although Dr. Simpson has merited the credit of having suggested the treatment of detachment, still the originator of it, was Dr. Kinder Wood, of Manchester, in 1822; and Dr. Charles Clay being a pupil of his, adopted the method of treatment, and bears this testimony in its favor: "I have for nearly forty years continued the same practice, with almost entire success, except in one or two solitary instances, when the distance traveled was great, and the loss of blood and time had produced an unconquerable amount of prostration. I am convinced from long experience, that the danger of version and hæmorrhage, may in a great measure be done away with by the simple detachment of the placenta. I have never known it to fail, nor do I believe it will ever fail if the detachment is completely and properly effected. We have also the highest authority for stating that the arrest of hæmorrhage is complete in 19 out of 20, and I have never witnessed any bad consequence from detaching the placenta."

I am aware this opinion will militate and is opposed to that which has been expressed, "that there is no *specific virtue* in total detachment of the placenta in arresting hæmorrhage. The arrest is due to some *other cause*. It stopped not because the placenta was wholly detached, but because the detachment had reached the physiologic limit—the *boundary line*," which Dr. B. has attempted to point out. The object of my paper is one of facts, and I must deal with them accordingly, and I trust I shall not wittingly transcend them, in my remarks based on the facts presented. The profession have, I believe, and time will also develop it, that the physiologic fact thus advanced by Dr. Simpson, will be received and accredited. What treatment I may ask can be certain of a favorable result in all those extremely trying and perilous cases? The prerogative of man with all his wisdom, cannot go beyond its own limitation, and nature will give way.

> "With just enough of life to show,
> That life will soon be gone."

I now pass to the third proposition, that which is advanced by Dr. Barnes. The separation of all that part of the placenta which ad-

heres within the *cervical zone*, to the lower polar circle or boundary line of safe attachment, Dr. Barnes remarks: "That we have then here, a new remedy, one applicable at the very juncture, when ordinary means are impossible or dangerous, as contrasted with the operation of totally detaching the placenta, it has the further advantage of not endangering the life of the child, and as contrasted with forced delivery, it has also the advantage of being less hazardous to the child." As the opinions of Dr. Barnes are urged with so much tenacity, and presented in such a confident manner, let us ascertain whether we can find such a new remedy as Dr. Barnes inculcates with his anatomical and physiological views.

It is not necessary I should rehearse the views of Dr. B. The principle of his physiological views is according to the diagrams I have given, and explanations of the same. The separation of the placenta from the dangerous placental seat—the cervical zone—up to the lower polar circle, the limit of placental spontaneous detachment, the labor is then in all respects a natural one. Now, what is this boundary line, or lower polar circle, between hemorrhage and safety. It is thus described, page 80: "If we now describe a circle within the womb at three inches distant from the os, we shall have drawn the lower polar circle, or boundary line, between hemorrhagic and non-hemorrhagic placental attachment." It is demonstrable and clear, not only from the diagrams of Dr. Barnes, but his own descriptions, that he places the placenta, if perfectly central, according to the diagram (not partial), in the cervix uteri, when it is fully expanded to its very limit before the full term, and therefore the os tincæ or os uteri externum, must be the first portion of the womb to be *pulled* open, to allow the placenta to pass through; that all the placenta, which must be, if the placenta is eight inches or seven inches in diameter, only attached by one to two inches all around the lower polar circle, the seat of safe attachment, and when this is reached, there is no more flooding, and the case can be left to nature to terminate, as it is according to Dr. B. then a natural one." I think the verification of this theory is entirely set aside by the morbid specimens I exhibit, and their diagrams also, and are in marked contrast to those of Dr. Barnes, and they testify to the non-expansion or dilatation of the cervix uteri during gestation; therefore if in any case it is recorded that the cervix uteri is an inch long when labor commences, it is plain there was no expansion of the cervix, but it retains its natural size, length and breadth. From diagrams of my own it is demonstrable that the placenta is attached to the lower polar circle of Dr. B., that is, the inferior part of the *body* of the uterus and *not* in the cervix, and it does not enter the cervix uteri, for it is closed, and if it is found there during the

first stage of labor, it is by its having been detached, from the body of the uterus as it expands and distends the cervix. These facts, it is not easy to gainsay; they require as full and ample experience on the same points of investigation to disprove them, and if they are or cannot be disproved, then the "new theory and the true physiology of placental presentations" have not the slightest ground for support, and must be rejected. They show and advance no new remedy for treatment for placenta previa centralis. Dr. Barnes, at page 81, remarks thus: "I have observed that the *hemorrhage* has completely *stopped* when the os uteri had opened to the size of the *rim* of a *wine glass*, or even *less size*." This I consider an *important admission* on the part of Dr. Barnes, and which I shall avail myself of, in illustration of the views I shall advance from the facts offered, and militating against the views of Dr. B., as the remedy to "control the hemorrhage is the separation of the placenta from the cervix uteri all round by the finger, which adheres within the cervical zone, up to the boundary line, the lower polar circle." There is an important difference between Dr. B. and myself from such evidence—that the placenta, instead of being placed in the cervical zone of Dr. B., is *not* there, but *absolutely* in the lower polar circle—and it does *not* enter the cervical zone, the dangerous seat of placental presentation, until the contractions of the uterus have forced it down, and *then* the os uteri internum reaches the limit of the size of the head of the child, or the presenting part, and can stretch or expand *no further*, and *this* is the limit of expansion of the cervix—the supposed boundary line of Dr. B.—and becomes the limit of safety to the mother, if the contractions are continued while the os tincæ is opened *only* to the size of a wine-glass; the cervix uteri then, from being an inch or inch and a quarter long just previously, has reached three inches in length and four inches or three and a half inches in diameter and ten to twelve inches in circumference, and its stretching from say one-half inch thick, becomes almost diaphanous, and then the placenta is detached fully two-thirds, whilst the os tincæ or os uteri externum is only opened as above stated. The placenta then presents its mamelon appearance from its location through the contraction in the cervix, and, should the uterine contractions be active, the placenta is fully detached from above, as the os uteri externum expands, and the child follows and is delivered—spontaneous separation having occurred—but on the contrary should the pains not be active after the os uteri externum has reached the size of the rim of a wine-glass, and the head of the child presenting, the feeble pains have no power to separate the placenta any further, owing possibly to the firm adhesion of the membranes around the circumference of the placenta, and the limit of expansion of the cer-

vix uteri internum obtained. No hemorrhage will result till more active contractions ensue, and then the hemorrhage will occur again until it is further or completely separated, or the upper and lateral part separated by the finger, according to Dr. Cohen's method, converting a complete into a lateral one. The error of Dr. Barnes is in placing or believing that the placenta is located in the cervix uteri, and therefore when the hemorrhage continues, and the os uteri externum is opened to the size of the rim of a wine-glass, the Dr., to control the hemorrhage separates the placenta, as he *supposes*, when it has been *detached* or *separated* by the uterine contractions.

No. Nature has accomplished her task, before Dr. B. has commenced his, and then appeals to us, from the facts as I have revealed, when this limit of the os tincæ has reached the size of the rim of a wine-glass, to aid her further, if she is incapable of accomplishing still more perfectly her future task or office—and thus, what Dr. B. has also supposed, instead of the boundary line being reached or accomplished, it has been reached by the uterine contractions—the head of the child tamponing the vessels by its compression from above, and by its gravity. The zone of safe attachment of Dr. B. is only the extent of the expansion of the os uteri internum, and if permitted to remain through feeble pains or through atony consequent upon the flooding, it would, to my mind, the views as I have stated, create no exemption or immunity from hemorrhage, and the principles therefore laid down by Dr. B. to rest or act upon are unsafe, and Dr. Barnes himself has not rested upon it solely—see case 33, appendix (not case 3,) London Lancet, June 1, 1861, page 527, which case I shall refer to. With the principles of Dr. B. in cases where there are no pains, and where there are no uterine contractions, can we be certain of the remedy of Dr. B. to warrant our resting confident on it, as with total detachment, or even Dr. Cohen's method, which I shall refer to shortly. Turning has been adopted in a greater number of the cases of Dr. B., after ruptures of the membranes, and ergot given. I must frankly confess that whilst I am open to conviction, and would wish to do all justice to him, nay, am solicitous for it, I do not think that *any* of the cases of Dr. B., whether recorded in his work on the physiology and treatment, or in his paper in the Obstetrical transactions, or in the Lancet for June, 1861—and the very case, the typical case, case 5 of his work, which he dwells upon so much, as the case which suggested to the author's mind the views he has given to the profession through his Letsomian lectures, and published before in the Lancet for 1848—was one where the detachment did not of itself stop the hemorrhage, and the opinion I express is also entertained and recognized by the reviews in the

Medico-Chirurgical Review for July, 1858, and the Dublin Medical Journal for May, 1858. If the principle as laid down by the "new theory" is so true and correct, and if it can be substantiated, it ought to be adopted by the profession for the sake of humanity. Let us proceed a step further, and for this purpose look at the typical case. I shall only quote the important part, that relates to the subject more directly: Case 4, Jan. 10. The patient has had four children at full term; in this pregnancy was suddenly seized with profuse flooding at full term; called to see her Jan. 1, 1846, 4 P. M.; stout, robust woman, having pains in the loins, and violent pains in the belly; great anxiety: examination per vagina: os uteri directed back to the promontory of sacrum; the *cervix nearly* an inch long: the os barely admits the finger; the quaggy sensation communicated by placenta is perceived: presenting part of the child not ascertainable (supposed not the head); hemorrhage still profuse; plugged the vagina with a sponge dipped in vinegar, so as to fill it completely; enjoined quiet. 11 P. M., 7 hours after the first visit: some considerable oozing has escaped through the sponge; pains continue; left the sponge *in situ*, as the patient did not seem much exhausted. Jan. 2, 8 hours after last visit, 15 hours after first, 7 A. M.: some oozing still going on; removed plug for examination; os uteri now size of a *crown piece*, and lips thinner, but still rigid; the placenta is felt, *detached* from posterior lip and back of cervix anteriorly; the membranes are felt, and the presenting part of child, recognized to be the feet; child living. At noon, five hours afterwards, I removed the plug; there has been no *further flooding*; os uteri the size of the rim of a wine-glass; no urgency. 1½ P. M.—Os uteri more dilated; ruptured the membranes during a feeble contraction of the uterus, just anteriorly to the border of the placenta, and siezed the feet, which readily descended; delivery was effected at 1:45, (ten minutes after the membranes were ruptured.) From this case Dr. B. deduces his physiological views and new method of treatment. On referring to this case where the placenta was located over the *posterior part* of the cervix *only*, it will be remarked that the hemorrhage, which had been profuse, ceased when the os tincæ was dilated to the size of the rim of a wine-glass, but at 7 A. M., Jan. 2, was dilated to the size of a crown piece, child living. Why was this flooding stopped? Let Dr. B. answer. The detached portion of the placenta had become plugged up by coagula, and the remainder of the placenta, being attached to the body of the uterus, was not likely to become separated during the contractions of that organ. It was, in fact, reduced to the normal condition in which the placenta is attached wholly to the fundus uteri. Dr. B. insists upon the fact, in this case, that the flooding could not be arrested by pressure from

within—the flooding stopped whilst the membranes were entire—moreover, the feet presented, which could not exert the requisite pressure. Now, how Dr. B. can frame his new theory and new method on this case, I have not been able to understand. On the contrary, it is one that can be adduced to verify the facts I have brought forward.

1. At 4 P. M., Jan. 1, the cervix was an inch long, therefore the cervix uteri was not expanded to form the cervical zone. It was in the lower polar circle; safe flooding.

2. Tamponed, as is usually done; left tampon in the vagina for 15 hours, then,

3. At 7 P. M., June 2, os uteri opened to the size of a crown piece; no flooding; pains feeble; placenta partially detached.

4. At 1½ A. M., 6½ hours after the last visit, ruptured membranes and delivery by feet.

The simple explanation of this is that from the stand point I have taken, under the uterine contraction, the os uteri internum expanded sufficiently to separate placenta from its attachment, and opened the os tincæ at 7 P. M., 15 hours after labor set in—the very limit it could reach because the breech of the child with the feet presented (the Dr. informs us that no pressure could be made by feet, as they presented, but I believe it is very rare for the feet to present without the breech being close by), and as the pains were feeble and the placenta detached, the lower part of the child, with the feet, made some pressure against the separated part, but if it did not, that would not be absolutely necessary—the limit of the circumference of the os uteri internum had been reached, pains feeble, and what nature demanded and called for at a much earlier period, 7 A. M., was when the os uteri externum had opened to the size of a crown-piece; tap the membranes at that time, and let the feet or breech come down naturally, or give small doses of ergot to excite the uterus to contraction, if necessary, for it appears as soon as the liquor amnii passed away, at 1½, delivered by turning, which might be accomplished, if necessary, earlier, or not at all. The Dr. "missed," to use his own expression, the appreciation of nature's method. But how could it be otherwise, as he rests his anatomical and physiological views on Sir C. Bell, and appears to ignore the physiological investigations and researches of Kolliker and others, and not the least by any means of these prominent and celebrated physiologists, those of his fellow townsman, Dr. A. Farre. I must believe he has established a false theory on false physiological and anatomical facts. In one of his diagrams to illustrate his views, he presents a drawing from Dr. Hunter's plates on the gravid uterus, plate 12, of the placenta lying in the cervix uteri, but on investigating and referring to the plate of

Dr. Hunter, Sydenham's edition, Dr. H. states it was *detached*, and plate 11 represents it as attached to the body of the uterus, marked letter R, and it therefore had been separated from the lower part of the uterus by the contractions of the uterus and passed into the cervix, as the patient had been in labor some time. This case from Dr. Hunter cannot be offered as one where the placenta had existed in the cervix, but as one where it was detached, from above according to Dr. H.'s own statement.

Dr. B. gives in his Letsomian lectures, 6 cases; 3 cases by turning; 2 had natural deliveries, and were all partial; 1 complete. In his paper in the Obstetrical Transactions, vol. 1, 14 cases of placenta partialis; 12 cases—7 delivered naturally, 5 turned; 1 post mortem; 1 of no account—18 cases in all; 8 turned, 9 naturally delivered, and 1 by ergot. Since the publication of his Letsomian lectures, Dr. B., in his remarks before the Obstetrical Society, July 6, 1864, in answer to the paper read by Dr. Robert Greenhalgh, says, he has seen since 1858, 59 cases. These certainly could not be all complete presentations, and if not, the principle of Dr. B. could not fairly be established, as the treatment in placenta partialis is so clear and definite, generally so successful, that it hardly applies to the cases of treatment by Dr. B., for the detachment of the placenta from the whole cervical zone, and really exemplifies the treatment of Dr. Cohen by lateral separation. I am aware that statistics show us the frequency, and therefore the more natural position or location of the placenta is at the sides. Out of 934 cases, 16 were at the fundus; 565 at the sides; 145 in the vicinity of the os tincæ; 11 on the os; 187 undetermined.

Thus we have 710 at the sides and near the os uteri externum, and when we consider the size of the placenta, when it is attached to the uterus, from its peculiar formation, composed of so many cotyledons, purposely to allow its expansion and diminution during the various movements of the body of the mother and especially the child, being much larger by expansion internally, than when external through delivery its length measuring 8 to 10 inches, it must reach from the upper part of the uterus to the vicinity of the os uteri internum, not externum, and hence from the frequency with which Dr. B. appears to have met with placenta previa, 59 cases in 6 years, I think he has considered many of his cases as true placenta previa, which were only naturally located in the lower part of the body of the uterus, and he claims the rate of mortality as 1 only to 14, with the addition of 24 others to his own, making 83 cases in toto.

Independent of his method of separating the placenta, whatever part of the placenta was in the cervix, partial or complete rupture of

the membranes was adopted, and contractions of the uterus created. If the rupture of the membrane did not succeed, then he gave ergot, or proceeded to turn. Let us take case 10, Obstetric Transaction: "On the 9th, saw patient, rather free hæmorrhage, os, size of the rim of a wine glass, and dilated; bulk of placenta attached posteriorly, but stretched across os three inches anteriorly; swept the finger around inner cervix, detaching placenta from the lower zone; uterus felt hard, but there was not sufficient contraction to cause tension of the membranes; head presenting; no hæmorrhage followed the operation; a dose of ergot assisted moderate contractile energy, but no budging of membranes; seeing no prospect of active contraction, and midwife being absent, I determined to deliver, and proceeded to turn. This case certainly does not illustrate Dr. B.'s views. If he separated the placenta from the lower zone and the head presented, (which it did) why give ergot and proceed to turn? Why was version, forced delivery attempted, if his principle was correct? What is this but the older method of treatment? Had the Dr. when the os uteri externum was on the 9th inst., opened to the size of a wine glass, lacerated the membrane, adopted lateral separation according to Dr. Cohen, and then gave ergot, he could have imitated nature more perfectly, more in accordance with the facts I have demonstrated, as the placenta was and must be detached from its seat above, in the lower part of the body of the uterus, and not detached as Dr. B. thought.

But we may take almost any of the cases he has reported, and the same course is pursued. Turning is frequently resorted to by him. But I desire to present one more instance, from the London Lancet, June 1, 1861. This is a case of complete presentation. "The placenta quite over the centre of the os. The cervix was more than an inch long. The os externum uteri was sharp, size of a half crown. Little bleeding at the time of examination, but copious before; had yawned and tossed her hands, and was faint and anemic. As I feared bleeding might return, and seeing the patient too much exhausted to bear further loss, I considered it necessary to expedite delivery. I therefore, detached the placenta from lower zone, and dilated the os tincæ with the caoutchouc dilator. The cervix was freely expanded in about five minutes, (which we might expect) but pains not excited. I was, however, enabled to pass my hand by the placenta, reach the membrane, which I ruptured with the skewer. The head presented, a foot was seized and the child delivered, Dr. B. remarks on this case: "If I had not used the dilator I should have been compelled to stretch open the cervix uteri with my fingers, at the risk of injury or to encounter the alternative risk of renewed flooding, &c. By accelerating labor, the patient was quickly placed in security. I must draw the inference

in this case, that if the membranes had been ruptured as early as 4 A. M., when the os uteri externum was the size of a crown, piece—secale cornutum given—the os tincæ would have opened by the contraction produced by the ergot, the *vis a tergo;* as nature required assistance at that time, as the limit of expanse of the cervix uteri had taken place, and the placenta detached, forced delivery could have been prevented. From all I have noticed in regard to Dr. Barnes' treatment, I am unable to appreciate his theory—his physiology—his anatomical views, or his method. He holds to one grand but universally received opinion, that uterine contractions are requisite in these great and important cases, and which principle is entertained and conceded by the Professor, but the method of obtaining it by the course he has proposed I cannot perceive, as I believe his cases disprove, and therefore I think he has "missed" the proper and correct and true interpretation of nature.

Dr. Cohen's method is so perfectly simple, clear and cogent, and so practical, that it claims especial attention from the profession, and I doubt not will be adopted in a great many cases where version was formerly resorted to. His method is, to rupture the membranes during a pain, and tear them freely from the border of the placenta, pass the finger around the half of the circumference of the os uteri internum, so as to detach the placenta completely from that side of the uterus, to which the lesser portion adhered. This done, there is nothing to prevent the os uteri from expanding, and carrying the liberated portion of the placenta over to the side where the bulk of the organ adheres. In many cases this will be enough to arrest the hæmorrhage. Dr. Cohen says he has never lost a mother, and rarely a child. What an encomium on this practice.

I now pass to consider the first proposition, and shall speak of the plan I have adopted for several years, and which is first to resort to the tampon if the flooding is profuse or active, and the cervix not yet expanded, the os tincæ closed; whether this occurs at the seventh eighth or ninth month, or full term, I prefer using the ordinary surgical bandage, two inches wide, which is easily introduced and the vagina can be packed with it fully and completely, pressing the soft, long, flabby cervix in contact with the placenta, thus acting as a free compressor, and preventing any hæmorrhage taking place internally or externally, acting also as an oxytocic, and permit the plug to remain, till pains are increasing or becoming more active, or sometimes even till it may be cast from the vagina, when an examination will find the os tincæ opened to the size of a crown piece, or rim of a wine glass. The internal os uteri will then be expanded to

its greatest capacity, the limit of its fullest expansion, four inches in diameter, and twelve or fourteen in circumference, and the placenta then detached and pressed into the cervix uteri, for the expansion, could proceed no further unless the membranes are ruptured by the natural power, but if not, and they are feeble, rupture the membranes, as there is no need of waiting any longer, nature has done all she is capable of doing or going to perform, and it is an admonition or call for our aid and assistance, and when this point has arrived the os tincæ as wide as described above, rupture the membranes, separate the placenta laterally, according to Dr. Cohen's plan, let the waters flow, and if the head presents, the uterine contractions active, the labor will progress, the placenta will be compressed laterally, as well as the venous sinuses at the side it was separated from, and the child delivered. But should the contractions be feeble through the loss of blood, or any other ordinary cause, then give the secale cornutum to advance the labor, and trust the rest to nature. There is no call for turning in cases of this character. Should there be very feeble pains before the rupture of the membranes, secale cornutum may be given in moderate doses, to increase the pains, and when they have commenced, tap the membranes and proceed as before mentioned. Should there be commencing exhaustion, and the os tincæ only opened to the size of a two shilling piece, and the hæmorrhage profuse, resort Dr. Simpson's method—allow the patient time to rally, by giving stimulants, applying warmth to the extremities, and adopting the ordinary means to restore her nervous system and the faulty circulation, and when she has rallied, if this method is necessary, turn. Should there be extreme exhaustion, and the os uteri irritated and the placenta complete, the same course is to be pursued and abide the events, for I think I should much rather see my patient die, without attempting version, because that is considered the secundum artem method at that perilous time, than undertake version, which, if my patient did not die by, she would most certainly by the shock to the nervous system, when she is almost if not moribund. Should there be a transverse presentation, (and which presentations are frequent, and out of four hundred and twenty cases one-fifth of them may be transverse,) before the membranes are ruptured, undertake external version, restore the head to its natural position, at the superior strait, have it retained there by an assistant, and when contraction of the uterus occurs, remove the tampon, tap the membranes, if not by the finger, by a stylet, and if the head should remain after the liquor amnii has passed, give the ergot in proper doses to sustain the contractions more efficiently, and leave the rest to nature. In truth it is our duty to imitate na-

ture as far as it is possible in these cases. Should the case presented exist, and could not be rectified by external version or the internal with it, then adopt the internal version, by the foot or knee. The method of tamponing or plugging I have adopted is easy and simple in its introduction, as well as its removal from the vagina, without disturbing the patient in the least, for the whole or part may be removed by merely pulling out the end gently. I have made trial of this method for several years, (although I have tried the colpurynter,) not only in cases of this nature, but in various forms of flooding in the young or married or parturient female. The quantity used may be in reference to the capacity of the vagina, according to its distensibility. I find that Dr. R. Greenhalgh, who read a paper on placenta previa before the Obstetrical Society of London, July 6, 1864, entertains as regards the treatment of placenta previa, views of treatment almost the same, only he uses the air ball, covered with spongiopiline.

In presenting the facts which I thought might be of some value to the profession, for their consideration, and investigation, I have endeavored to establish some points in regard to a more just interpretation of nature, in a practical aspect, during such a critical and momentous course of events in pregnancy, when nature appears to be suicidal, but which from these investigations, although presenting no novel method of treatment, but mapped out according to the circumstances of the case, fortifying and strengthening the confidence and judgment of the accoucheur, the former method of tamponing and rupturing the membranes, and it teaches us to trust more decidedly and implicitly than ever to nature, imitating her own way, and not robbing her of any of her own rights and thus avoiding as much as possible, only as a dernier resort, version, but if this is imperative, duty demands its accomplishment. The facts instruct us also that a stage in the labor arrives in every case of placenta previa centralis, when the os tincæ is opened to the size of a dollar, or rim of a wine glass, that the placenta is detached, one half and sometimes even two-thirds, and if the pains are feeble will not be separated any further, therefore, she asks for, nay demands our aid. Nature has done her task to the utmost limit of her power and ability, and we have been instructed that our duty then commences to assist her in the delivery.

I shall conclude by giving the following propositions on the various points at issue, and I think it must be apparent that on these different topics, there have existed wide differences of opinion, without any adjustment. If the facts I have presented have any tendency to throw new

light on some of them, I shall have reaped much pleasure therefrom, and subserved the interests of our profession.

1. Proposition. The perfect integrity of the cervix uteri during utero gestation in its whole length, without developing from above downwards, or from below upwards, but modified by physiological softening to prepare it for the office of expansion at the time of labor and not before, for the exit of the child.

2. That the placenta previa centralis, is over the os uteri internum, and not in the cervix uteri at all, before labor commences, as is believed or demonstrated.

3. That the limit of spontaneous detachment of the lower polar circle, the boundary line of Dr. Barnes, is not the zone of safe attachment after separation of the placenta.

4. The cause of arrest of the flooding in general is the limit of expansion of the os uteri internum to the extent of 12 or 14 inches in circumference, and $3\frac{1}{2}$ to 4 in diameter, and 3 inches long.

5. That the boundary line thus reached by nature is only safe, so far as separation occurs by the contractions of the uterus.

6. That the hæmorrhage comes from the uterus as seen, and not from the placenta.

7. That the flooding is diastolic, not systolic.

8. That the method of separation of the placenta by the uterine contractions is from the centre and not from the margin.

9. That the method of Dr. Simpson is preferable in cases of extreme exhaustion, to version, until nature can be restored in some degree to perform it.

10. That external version should be adopted first, in transverse presentations of the shoulder, neck, or face, before rupturing the membranes, if not successful, then internal and external version together, then true version, but not rapidly, if the other methods fail.

11. That the former and usual methods are confirmed by these investigations, in their value, such as tamponing and rupturing the membranes, and giving ergot.

I will conclude what I have to say on this important subject, aware I may have been more prolix, than the subject may have demanded, but from the nature of the resumé of the various topics, and the opinions thereon, it could not well have been avoided, and to such as object, because opposed to all innovations, I will only repeat the words of one of the patriarchs on obstetrics, Mauriceau—"I desire if you mean to profit by my remarks, you will read and examine them with critical envy, free from all preoccupation that may obscure your judgment and hinder your acknowledging the truth of what I profess to teach, therefore follow not such as condemn a conception when they understand it not, and believe it false because it is new."

ARTICLE XII.

Unofficinal Iodides. By Wm. Manlius Smith, M. D., Onondaga county, N. Y.

The attention of the Society is solicited for two medicines not mentioned in the U. S. Pharmacopœia, but which, it is believed, have some advantages not possessed by officinal articles of the same general character. The medicines referred to are Iodide of Cinchonine, as it may be called, or Iodide of Cinchonium, as some would have it called, in analogy with Chloride of Ammonium, and Iodide of Cadmium.

Iodide of Cinchonine may be formed most readily and easily by dissolving in hot Hydriodic acid, the alkaloid, Cinchoni, in the proportions of 152 grains for each 126 grains of Iodine that the Hydriodic acid contains. On cooling, the Iodide of Cinchonine is deposited in crystals, a portion, however, remains still in solution, which may be recovered by careful evaporation to dryness.

The Iodide of Cinchonine is in the form of flat-oblique rhombic prisms, of a lemon yellow color when powdered, slightly soluble in cold water, much more freely in hot water and in ordinary alcohol. It appears to possess the resolvent properties of Iodine and the tonic properties of Cinchona, and naturally suggests itself as a remedy in strumous and tuberculous diseases, &c. The advantages it possesses over Iodide of Iron, are its stability and consequent easy keeping properties, and want of the disagreeable taste of the iron preparation, and as furnishing a convenient method of exhibiting iodine, when iron is not also indicated. The advantage over Iodide of Potassium is, that it rather strengthens than diminishes digestive power, and may be long continued without painful results.

The dose employed by the writer, has usually been one to two grains three or four times daily. In some cases it has been more freely used. I can speak more particularly of its beneficial effects in tubercular phthisis, manifested in, oftentimes, greatly staying the progress of the disease, and in bronchocele, in conjunction with topical applications as may be hereafter mentioned.

The Iodide of Cadmium may be formed by digesting Iodine and an excess of Cadmium in the granulated or thinly laminated form, with water at the temperature of about 120° F. for some time. The mixture should be occasionally agitated, and when a colorless liquid

is obtained, it may then be slowly evaporated to dryness, when the Iodide of Cadmium appears in the form of pearly looking scales.

It is freely soluble in water and in glycerine. It resembles acetate of lead in taste. So far, I have used it only as a topical application and mainly as a preparation of Iodine. An advantage it has over preparations of Iodine for external application, is its absence of color and its very moderately irritating properties when applied to the unbroken skin. It is, however, quite efficient, and, as I think, remarkably so, in removal of exuberant granulations.

The use that I have most frequently made of it, is as a topical application, in solution in glycerine in cases of bronchocele. The strength of the solution has commonly been about 60 grains of Iodide of Cadmium to an ounce of glycerine, and it has been directed to be applied twice a day, and a cloth wet with it worn on the part during the night, and in the day time too, when practicable.

At the same time there has commonly been prescribed $1\frac{1}{2}$ grains of Iodid of Cinchonine, in conjunction with $\frac{1}{30}$ grain of Strychnine in the form of a pill, to be taken three or four times a day.

All the cases of bronchocele, thus treated, have rapidly improved, and when sufficient perseverance in the use of the medicine has been had, the swelling has totally disappeared. Some cases have been cured in about one month and others only after three or four months.

WM. MANLIUS SMITH.

ARTICLE XIII.

SMALL POX.

Remarks on Vaccination: the possibility of communicating Syphilis and other Diseases through the Vaccine Virus, etc., etc. By CYRUS RAMSAY, M. D., LL.B., etc., etc., Registrar of Records and Statistics of the city of New York.

Of all the diseases that afflict the human family, there is perhaps no one so much dreaded by the community in general as small-pox. A certain prince would not permit it to be named within his hearing, so great were his fears. This occurred long before the era of vaccination, and at a period when whole kingdoms were almost depopulated by this fearful scourge. Even now, when the disease can be so modified with but little effort as to render it comparatively a mild disorder, the occurrence of a few cases in a neighborhood will beget the most intense excitement. This universal fear, and the numerous deaths it caused, perhaps impelled medical men in a degree to greater vigilance in ascertaining some means to mitigate its severity; accordingly we find the Chinese, centuries ago, inserting the desiccated lymph of a pustule into the nostrils, hoping thereby to modify its action: this process was called ingrafting. Next inoculation was resorted to; the results were so favorable that it soon became almost universal all over Europe. But the *greatest discovery* was *vaccination:* this is acknowledged to be one of the greatest achievements of medical science; yet, strange as it may appear, soon after its discovery most violent opposition was raised against it by certain medical men, clergymen, and a portion of the community.

Physicians in different parts of the country where the discovery was made delivered lectures, wrote books, etc., etc., against it; ministers of the gospel preached sermon after sermon in opposition to it, in which they denounced its learned advocates as emissaries of the devil—enemies to God and man.

The following appears in the Papers on Vaccination, published by the board of health, London, as descriptive of the opposition and the strange and ludicrous opinions set forth:

"The very magnitude of the promised boon almost justified mistrust; and, to persons ignorant of the Gloucestershire experience, that good should accrue from such a source was a strange supposition. Fears were more suggested than hopes. What could be expected from a 'bestial humor' but new and dreadful diseases? Who could see the limits of its 'consequences,' physical or moral?

What security was there against 'horns' growing on the vaccinated? What 'ideas might arise in the course of time from a brutal fever having excited its 'incongruous impressions' on the brain? Who knew but that 'the human character might undergo strange mutations from quadrupedan sympathy, and some modern Pasiphae rival the fables of old?'

"While these physiological conjectures were gravely pressed upon the public, *religion* and *morality* were not less misargued to the same effect. Leviticus was quoted, with dark insinuations against 'contaminating the form of the Creator with the brute creation.' Small-pox being a 'merciful provision on the part of Providence to lessen the burden of a poor man's family,' was it not 'impious and profane to wrest out of the hands of the Almighty these divine dispensations?' What could ensue on so daring a measure of attempted prevention but some unimagined punishment?

"Reply to these various scruples (where they were sincere) was no difficult matter. Those who feared mysterious bodily changes were answered from the collection of observed facts and experiments; were assured that in Berkeley neither horns had grown nor had Minotaurs been begotten. To the others, superstitious mistrusters of good, it seemed enough to say that, in this beneficent economy of the world, antidotes are ever scattered side by side with poisons; that not exclusively the latter are of divine gift; that man's duty concurs with his instinct and privilege to struggle against physical as against moral evil. Up to a certain point the weaker side in a controversy is apt to grow noisier with defeat. In proportion as Jenner's merit became recognized by Parliament and the public, those who had committed themselves to opposition became more and more vehement against his matchless discovery. All that had been predicted was now, they said, in fulfillment. The nation unconsciously was dying of vaccination. Terrible portents were described. A child at Peckham had its former natural disposition absolutely changed to the brutal, so that it ran upon all fours like a beast, bellowing like a cow, and butting with its head like a bull! Sarah Burley's face was distorted, and began to resemble that of an ox! Master Joules, similarly degenerating, became the ox-faced boy—a proverb and a frontispiece!

"A lady's daughter coughed like a cow, and had grown hairy all over her body! William Ince, too, had grown patches of hair not resembling his own, but of the same color, length and quality as that of a cow! Many had suffered like him! some also squinted as only oxen can squint! Others had lost their nails and the ends of their fingers! Eruptions, ulcers, mange, abscesses, scabs and blotches, glandular tumors, and diseased joints and decaying bones,

fevers and blindness, and gangrene and convulsions were multiplying among the victims of Jenner! Deaths, of course, were plentiful; and on what but vaccination could they depend? It was the old story again:

> "'Post ignem æthereâ domo
> Subductum, macies et nova febrium
> Terris incubuit cohors;
> Semotique prius tarda necessitas,
> Lethi corripuit gradum.'

"Such was the experience of the opposition. Divested of its more ludicrous imaginations, and some allowance being made for an occasional unskillfulness of those who pretended to vaccinate, all resolves itself into the one not uncommon error of confounding what is fact with what is opinion or inference.

"A child coughed—to the ears of the vaccinophobist the sound was as of a cow; to his intellect it was the effect of vaccination. A child was ugly or squinting, or it had those skin eruptions which have always been frequent incidents of infancy—at once to the alarmist there was vultus taurinus or tinea bovilla. In a word, the oldest and most familiar diseases were thus renamed in conformity with a belief that vaccination was causing them, while in reality there was no more reason in this belief than if vaccination had been charged with occasioning infants to cut their teeth, or with leading boys to prefer cricket to Cornelius Nepos.

"As the chances of the opposition became less hopeful, so did their language grow worse and their arguments more wild. Placards and caricatures were resorted to. Tender points were aimed at. Were persons about to marry, might not vaccination injure their fortune in life? Might there not be a disclosure of shocking facts? and was nothing due to patriotism?

"Evil and Bonaparte (1807) and vaccination are allowed to triumph for a time, perhaps as the scourge and punishment of our sins; but shall we submit because they have for awhile been prosperous? No! Britons never, never! etc.

"You will find it difficult to believe that the very oldest of this nonsense which I have transcribed was written in England within sixty years of the present time. By us for half a century it has been forgotten, or only recalled as an echo by occasional last words from the Continent, where, far off, there is seen sometimes a feeble wave still rippling from that old flood of ours.

"It is wearisome work to read stuff so stupid or so dishonest. But I have ventured to trouble you with it, as with some other parts of this narrative, in order that it may plainly be seen how little of suddenness or surprise there was in the first social successes of vaccina-

tion; how everything possible and impossible was affirmed against it; how all weaknesses and prejudices were appealed to; how every inch of progress was contested, and how little it can be said that Jenner stole a march on the public mind. Further (because there is nothing new under the sun, and the wheel of time brings back the follies of the past oftener than its wisdom), it may become necessary, in case these doctrines should emerge again from obscurity, to refer to their right authors the praises of original invention, and to remember that fifty years ago such objections were examined and refuted and condemned.

"For when those outcries were raised the public naturally hesitated and asked for explanation. Mosely and Squirrell, and Rowley and Birch, and Lipscombe, and even Stuart, were, no less than Jenner, members of the medical profession. To the uninitiated it was doctor against doctor."

The success, however, of vaccination soon became so apparent that its opponents ceased their clamor against it, but after a lapse of a few years other objections were raised; it was urged,

1st. That the advocates of vaccination had not accomplished all they claimed;

2d. That persons would take small-pox (modified) after vaccination;

3d. That incurable constitutional diseases were communicated through the vaccine virus.

To meet these and other objections the Epidemiological Society of London prepared four questions, that covered the grounds of controversy, and through the sanction, if not by an act of Parliament, submitted them to a large portion of the medical men residing in all parts of Europe. The following are the interrogatories:

I. Have you any doubt that successful vaccination confers on persons subject to its influence a very large exemption from attacks of small-pox, and almost absolute security against death by that disease?

II. Have you any reason to believe or suspect that vaccinated persons, in being rendered less susceptible of small-pox, become more susceptible of any other infective disease, or of phthisis; or that their health is in any other way disadvantageously affected?

III. Have you any reason to believe or suspect (a) that lymph, from a true Jennerian vesicle, has ever been a vehicle of syphilitic, scrofulous, or other constitutional infection to the vaccinated person; (b) or that unintentional inoculation with some other disease, instead of the proposed vaccination, has occurred in the hands of a duly educated medical practitioner?

IV. Do you (assuming due provisions to exist for a skillful performance of the operation) recommend that, except for special reasons in individual cases, vaccination should be universally performed at early periods of life?

These questions, it will be observed, contain points in regard to this disease upon which there is yet a diversity of sentiment in all countries among medical men; and as physicians generally practice according to their own belief, it is extremely desirable that the truth should be ascertained, and facts as far as possible established, for upon this in a degree depends the prevalence of this disease; for illustration, as it regards the first question, one physician believes that vaccination once performed protects the person vaccinated during the remainder of his life against an attack of a variolous disease of any character; he acting on this opinion will not re-vaccinate, while another medical man is fully persuaded that vaccination protects the person for only a few years, consequently he re-vaccinates.

If the former be in error, then he does not only render his patients liable to an attack of varioloid, but to produce genuine small-pox in persons unprotected who may come in contact with his patients having varioloid, and thus be the means of spreading the disease to an incalculable extent; and if the latter is mistaken then he subjects his patients not only to the inconvenience of being repeatedly re-vaccinated, but also keeps them in almost perpetual fear of an attack of the malady.

The same diversity of opinion exists in regard to the other questions, and, as above intimated, physicians will not only act in accordance with their views, but will inculcate the same doctrine throughout the community in which they reside; and I need scarcely say that the sayings of a physician are looked upon with as much confidence, if not, indeed, more, by those who have confidence in them, than are that of any other class of educated men, the clergy not excepted. It is therefore of great importance that these conflicting opinions should, if possible, be reconciled; and this was no doubt the opinion of the gentlemen who prepared the matter for investigation; and further, as the period from the era of vaccination to the date of the inquiry was of a sufficient length to test these various theories, the committee began the work of preparing and forwarding the interrogatories to five hundred and thirty-nine physicians and surgeons of great eminence, practicing in all the cities and large towns in Europe. The replies were received in due time, arranged, and printed for general information.

The unanimity of sentiment and views of so many professional men as is here presented is a rare event, and adds great weight to the

opinion. It establishes the doctrine enunciated in the different topics, if such a thing can be.

According to the language or sentiment of the first question, the members of the committee did not entertain the opinion of total extinction of small-pox, but of its modification—mark the expression, "Have you any doubt that successful vaccination confers on persons subject to its influence *a very large exemption from attacks* of small-pox and *almost absolute security against death* by that disease."

This enables those to whom inquiry was made to answer (if that was their belief), "No, or none whatever," as some did; others accompanied this negative reply with remarks, of which the following is a specimen, but all acquiesced in the question just as it reads. The "utter extinction" theory was not mentioned by any. The inference, then, is that all of these gentlemen believe in the doctrine of revaccination. Extinction is out of the question, for if vaccination does not protect the persons *absolutely throughout* life, then the theory is utterly fallacious.

"Association Medical, of Frankfort-on-the-Main, through Dr. Professor Varrentrapp: Vaccination guards against variola in the immense majority of cases, and particularly until the years of puberty.

"According to the experience made in the St. Rochus Hospital, of this place, there appears to be no substantial difference in the course and prognosis of variola in vaccinated and non-vaccinated persons in cases where the disease attains a complete development; there is even no such difference in favor of those who have suffered from variola once before. It must, however, be remarked, that in the plurality of cases of vaccinated individuals being befallen with variola the disease proves abortive and is defeated.

"N. B.—In a village near Frankfort, from forty to fifty cases of small-pox were met with in the year 1839; and the few deaths which occurred were all in non-vaccinated persons."

"Baker, A., F. R. C. S. (Birmingham), surgeon to the General Hospital: I have no doubt that efficient vaccination entirely exempts the large majority of those who are submitted to it from small-pox: and that then, if it does not do this, it modifies the disease, and renders it less dangerous. Fatal small-pox does occur after vaccination; but that does not disprove the general utility of vaccination. The worst case of small-pox that ever fell under my notice was one in which the patient was covered with "pits from previous small-pox."

"Bourne W., M. D. (North Shields): I consider one successful vaccination modifies small-pox during the whole period of life, and

that, repeated at intervals of a few years, it gives, to say the least, a very great exemption from its attacks. I had, about thirteen years ago, an opportunity of seeing this tested, on a large scale, in Prussia."

"Bamberger, H (Wurzburg), M. D., and Professor of Medicine in the University: The preservative power of inoculation is indeed not an absolute one, and seems, after a certain number of years, to be weakened, or even lost. However, the greater number are certainly not befallen with small-pox; and wherever this happens, the form in which the disease is developed is, as a rule, less severe [the so-called variola modificata], and mostly tending to a very mild course. Accordingly, a fatal issue is proportionately rare. In the great hospital of Vienna, in which I was formerly employed, and where more than 20,000 patients a year are treated, there occurred, in the course of three years, 1,713 cases of small-pox, 136 of which had a fatal issue. That ratio, although apparently not a small one, is very favorable indeed when compared to the ratio of fatal cases in other acute diseases, particularly small-pox itself, as it prevailed before the discovery of vaccination, and when, further, it is taken into account that a not inconsiderable portion of those individuals had not been vaccinated. Vaccination, it is true, is of legal obligation in Austria; but it is very often evaded in those less cultivated provinces of the realm from which the class of laborers and handicraftsmen in Vienna is chiefly recruited. In Bavaria vaccination is more strictly managed; and during the two years and six months that the direction of the hospital here has devolved upon me (in which rather more than 4,000 patients a year are treated), I have not met with a single fatal case of small-pox."

"Bateson, J. T. (Lancaster), surgeon to the Infirmary: I have no doubt that successful vaccination confers on persons subject to its influence a very large exemption from attacks of small-pox; and those who suffer from it after being successfully vaccinated, have it in so mild a form that death is very seldom the result. In my own practice of more than thirty years, I never lost a case of small-pox after successful vaccination."

The period at which the protective influence of vaccination ceases is not positively ascertained; my opinion is that it is of different duration in different individuals, say from six to ten years—the average about seven years.

The second question, which is: "Have you any reason to believe or suspect that vaccinated persons, in being rendered less susceptible of small-pox, become more susceptible of any other infective disease, or of phthisis; or that their health is in any other way disadvanta-

geously affected?" grew out of the opposition to vaccination, the opponents contending that nothing was really gained for mankind by the reduction of deaths by small-pox, that by rendering them less susceptible to it they became more liable to other diseases. This received a unanimous "No."

The third question is: "Have you any reason to believe or suspect that lymph, from a true Jennerian vesicle, has ever been a vehicle of syphilitic, scrofulous, or other constitutional infection to the vaccinated person; or that unintentional inoculation with some other disease, instead of the proposed vaccination, has occurred in the hands of a duly educated medical practitioner?" This is equally important as the first, for should the idea become universal that other diseases can possibly be communicated through the vaccine virus, soon after would one of the greatest discoveries of man become a second-rate achievement. Even now some will say, rather than have their children vaccinated with 'bad virus,' they would prefer to let them take the risk of small-pox. In my judgment no physician should express an opinion publicly in favor of the theory of communicating disease in this way without having the most positive evidence, a thing that but few if any possess. I do not believe it possible to communicate syphilis in this way; secondary syphilis *cannot be communicated*, and what is it but secondary in the person at the time it is said to mix with the vaccine virus? A moment's reflection shows the theory utterly fallacious. Among the 539 eminent physicians and surgeons referred to who have given an opinion, but three have ventured to assert their belief, while 510 say most positively that it *cannot be done*, 20 are in doubt, and 9 have no experience. With such an overwhelming majority against it, the point would seem to be settled, *i. e.* syphilis, scrofula, &c., cannot be communicated through the vaccine virus.

The fourth relates to the age at which the child should be vaccinated. All agree that it should be done at an early age.

Opinions of several Physicians on the Subject.

Remarks on the alleged transmissibility of syphilis by vaccination. By William Acton.

In answer to the question, "Has lymph from a true Jennerian vesicle ever been a vehicle of syphilitic infection to the vaccinated person?" I unhesitatingly affirm that I have never witnessed a single case which would bear out the supposition. I have, however, been consulted on several of these supposed cases, showing that there are members of the profession who still entertain the opinion that such a mode of infection is possible; but in all these doublful cases I have

been enabled to point out the sources of error, which I will shortly enumerate, as well as the reasons, founded on numerous experiments, which induce me to believe that a syphilitic taint cannot enter the system in this way. I have been more particular in investigating such cases from the conviction that syphilis is the only disease which can offer positive proof of the existence or non-existence of hereditary infection, inasmuch as it (syphilis) cannot be conveyed into the system either by the air we breathe, the food we swallow, or arise from the situation we live in; circumstances which may become sources of the other hereditary taints you alluded to.

In the first place, I may be and have been told that it was only after vaccination that the syphilitic taint appeared; the infant and the parents having been previously free from all traces of disease. In the case of some this is conclusive evidence of the mode of entry of the poison into the child's system. In several such instances that I have witnessed, my opponents have been unable to satisfy me that the child from whom the virus was taken was a syphilitic infant, as I urge that we must not assume this important point, as is often done.

I have not alone, however, pointed out this source of error, but I have recalled to the recollection of those professional men who have consulted me a law which appeared to have escaped them, that syphilis in infants does not usually appear at birth; the child is born healthy, often is a very fine child, and it is from ten days to six weeks after birth that syphilitic symptoms appear; hence the reason why the apparent syphilitic infection follows vaccination. Under such circumstances, all that I can admit is that vaccination does not prevent the development of syphilitic symptoms.

Another law is equally known to those who see syphilitic children: that if an infant is born with the syphilitic taint, the disease may not show external marks of its being in the system until some exposure or depressing cause comes into operation. Such may be vaccination, for no one will deny that the maturation of the vesicle is often attended with derangement of the child's health, and in such cases the evolution of the hereditary disease occurs as a natural consequence of a well-recognized law.

Another frequent source of error is diagnosis. I have given instances in the last edition of my work on Disease of the Urinary and Generative Organs, and have seen others since, in which children are said to have been the subjects of syphilitic taint who labored under eczema, lepra, and popular eruptions, which the evolution of the vesicle had brought about. No specific treatment had been resorted to, and yet the child perfectly recovered. Seen by other persons, such instances might and have been called cases of children

laboring under syphilitic taint introduced into the system by vaccination.

Although I have for a long time been fully convinced that infection cannot be thus introduced into the system, I have never felt myself justified in directly vaccinating children from the virus of vesicles obtained from syphilitic infants, nor to my knowledge has any one else attempted it. The results, I feel convinced, would be negative, and the practice would be unattended with ill consequences. I venture to affirm this from the impossibility of inoculating secondary symptoms, which, in spite of all our numerous experiments, we have never succeeded in producing. Not only has the lancet been used, but portions of the secretion have been applied, for lengthened periods, to the skin of the person we wished to infect. In the last edition of my work I have given an instance of a prolonged contact of two persons sleeping together; yet even in this case no contamination took place. A few exceptional cases have been cited by others, of an opposite kind; but on investigation the sources of error have been shown to arise from a want of the ordinary precautions which, when taken, proved to the operator the cause of his experiments differing from the general result.

If, however, we distinctly say the lymph of the Jennerian vesicle is unable to contaminate the infant, there are plenty of other sources which we may choose from. Thus the fœtus may be infected by the father or by the mother; and, as shown in my late work, infection may come not from the legal or putative father, but from the true father (may be a stranger) who is often not forthcoming when the case is investigated. Experience teaches the private practitioner that these sources of the taint are the most frequent; and it is to those we must look, and not to vaccination, as the cause of the complaint.

OPINION OF THE IMPERIAL SOCIETY OF SURGEONS AT VIENNA, AUSTRIA.

First Question: "Has experience taught that successful vaccination secures to persons operated upon a complete safety against small-pox, and an almost perfect surety against death occurring from this disease?"

This question requires two answers, for, in the first section, it applies to the security afforded by vaccination against small-pox; in the second, to the danger of death from small-pox to persons who have been vaccinated. In respect to the first section of the question, which might be put thus: Does vaccination act as an absolute or relative preservative against small-pox? the society can entertain no other opinion than that which has gained universality through observation made at all times and in all places, viz: *vaccination with cow-*

pox produces only a relative safety against small-pox. As proof of this relative preservative power (in addition to the allusion to the fact that since the introduction of vaccination small-pox has been less frequent epidemically, and has assumed a milder form,) the following figures, taken from the experience of the members of the Committee, will show:

During the last ten years 202 children were treated for small-pox in the St. Joseph's Children's Hospital, on the Wieden, of whom 74 were vaccinated, and 128 were non-vaccinated; figures which show of themselves that non-vaccinated children are more frequently attacked by small-pox than those who have been vaccinated, but which derive more importance from the known fact that, owing to the vaccination laws here in respect to children at an early period of life, the vaccinated children far outnumbering the non-vaccinated. The calculation of the number of patients treated for small-pox during the last twenty years in the Imperial General Hospital of Vienna showed that, of 6,213 patients, 5,217 were vaccinated, and but 996 were non-vaccinated; a result which might easily lead those who will not believe in the preservative power of vaccination to the conclusion that vaccination, instead of preserving from contagion, only increases the liability to infection from small-pox. This, however, as may be easily understood, is but a false deduction. When it is considered that the great majority of the present population have had the benefit of vaccination during their early youth, and that in the present day there are very few persons to be met with who have not been vaccinated, the number of 50 non-vaccinated persons, who, according to the above number 996, are on the average attacked in one year, may be called very large, and would seem to prove that the few non-vaccinated persons still to be found are more liable to be attacked by small-pox contagion than are the vaccinated, of whom the average yearly number may be stated at 260.

An *equal* liability to infection from variola in the cases of vaccinated and non-vaccinated persons would, according to the above figures, only be admitted if the number of non-vaccinated persons, compared with that of vaccinated persons of the population of Vienna and its suburbs, were as 50 to 260, *i. e.* as 1 to $5\frac{1}{2}$; or, in other words, if out of 11 grown-up persons but 9 were vaccinated and 2 non-vaccinated—a proportion which it is well known does not at the present time exist, and which, as the law rendering vaccination compulsory has existed in Austria for more than 50 years, cannot exist.

The second section of the first question—information as to whether vaccination produces an almost absolute security against death from variola.

The answer to this is—*vaccination in this instance also affords but a relative security.*

It is well known that the danger from small-pox increases with the number of efflorescences, and declines in the same ratio with a smaller number of pustules; it has, therefore, been customary, since the introduction of vaccination, to admit of three species of small-pox, viz: a violent and dangerous form, called variola vera, which is characterized by its slow progress and breaking out, and by the running into each other of the pustules; in contradistinction to this, the chicken-pox, which always takes a mild form, is not dangerous, either as regards the health or life of the patient, and produces few pustules, which quickly die away, Between these two extremes is the varioloid, or modified small-pox, which (without taking any fixed form) also runs a quicker course, and particularly in the stage of decrustation, and very seldom terminates fatally.

If experience teaches us that, with vaccinated persons, chicken-pox and varioloid more frequently occur than true small-pox, and, in inverse proportion, non-vaccinated persons are more frequently attacked by variola vera than by the milder forms of small-pox, it shows most clearly that through vaccination with cow-pox a mitigation of the morbid process has taken place.

Of the above-mentioned 6,213 cases of all forms of small-pox treated in the General Hospital during twenty years, there were 1,323 of *true small-pox*, 1,475 of *varioloid*, and 3,415 of chicken-pox; and the distribution of these, according to the vaccinatedness or non-vaccinatedness of the patients, is expressed in the adjoining table:

	Total.	Variola Vera.	Varioloid.	Chicken Pox.
Vaccinated	5,217	732	1,282	3,203
Per 100 cases	100	14.30	24.57	61.59
Non-vaccinated	996	591	193	212
Per 100 cases	100	59.34	19.38	21.28

Variola Vera, therefore, occurs four times as often, and chicken-pox three times as often, in non-vaccinated as in vaccinated persons, a proportion which evidently decides in favor of vaccination.

As regards the cases of small-pox which terminate fatally, we receive from both the aforementioned hospitals the following data, viz: of 202 children treated for small-pox in St. Joseph's Children's Hospital, 37 died, of whom 33 were non-vaccinated, and 4 vaccinated.

In like manner, out of the 6,213 adults who were treated for small-pox in the Imperial General Hospital, 571 died. Of these, 271 were of the 5,217 vaccinated, and 300 of the 996 non-vaccinated; or, in other words, the average mortality from small-pox, during twenty years, was 5 per cent. per annum among the vaccinated, and 30 per

cent. among the non-vaccinated (*i. e.* 6 to 1,) figures which are too significant to require any comment.

Second Question: "Has experience given grounds for belief or conjecture that vaccinated persons, owing to their being less liable to infection from small-pox, are therefore more liable to typhus fever, or any other contagious disease, or to scrofula or phthisis, or that their health is in any other way injuriously affected?"

This question is divisible into three parts—each of which must be answered by itself:

a. Whether vaccinated persons are more frequently attacked by other contagious diseases, especially by typhus fever?

b. Whether scrofula and phthisis are more frequently met with among vaccinated persons?

c. Whether vaccination has a prejudicial influence on general health?

a. The history of the contagious exanthems teaches us that these have for centuries been the scourge of mankind, and that hundreds of thousands of the human race have been carried off by measles and scarlatina before the slightest idea of vaccination with cow-pox presented itself; and even from observations made during the present century, showing that measles and scarlet fever prevail epidemically less frequently, and in a milder form, than in former times, one could rather come to the opposite conclusion, and consider this to have been caused by vaccination, were it not that immediately after vaccination, as well as after recovery from small-pox, other contagious exanthems have made their appearance, and accordingly vaccination, as well as small-pox, is inactive as a preservative against measles, scarlet fever, typhus, &c. Any one who is acquainted with the fact that cow-pox, sheep-pox, and small-pox proceed from the same original contagion, which is sufficiently proved by the experiments by Thiele, Culy, Gessner, Reiter, Bousquet, Iwanowies, &c., would not expect more from vaccination as a preservative against other diseases than from small-pox.

Different diseases prevent each other, for they *never* appear at the same time in one individual, although they may immediately succeed one another in the same person.

Vaccination can, accordingly, produce neither measles, scarlet fever, nor any other contagious disease, nor act as a preservative against them.

Against these zymotic (zymotischen) diseases it has no influence.

As far as regards typhus specifically, in order to explain the proportion of this disease to vaccination, statistical evidence is wanted as to whether *before* or *after* the introduction of vaccination more people were attacked by it.

Without considering the other difficulties and imperfections of such a work, it would be no easy task to collect accurate information, owing to the different nomenclatures of the diseases at different times; for if from the circumstance that in ancient reports of diseases and registers of deaths the name typhus appears less frequently we were to infer that typhus was a disease of modern times, we should be guilty of a great mistake, for our forefathers made a distinction between *febris* (nervosa, putrida, asthenica, adynamica, versatilis, stupida) and *typhus;* and in the present day the correct conception of the last named disease is not so generally extended but that febris mucosa, pituitosa, gastrica cum nota nervosa, febris typhosa, miliaris, &c., are by some surgeons ranged separately from it.

The great revolution in medicine brought about by sober observation at the bedside of the patient and the dissecting-table has thrown overboard a number of names of diseases which described nothing, and retained only those which are necessary to describe different processes. Now, as the efforts of pathological anatomy were successful in proving that the diseases formerly known under so many different names were not different diseases in themselves, but were cases of typhus, modified in degree by local affection and other circumstances, the comprehension of typhus became more extended, and this name is, therefore, in the present day, more frequently used than formerly. That no mutual attraction, however, exists between vaccination as a preservative against variola and typhus is proved by the circumstance that during the age of childhood (*i. e.*, between one and two years of age), during which vaccination is generally practiced here, typhus is a disease which rarely occurs, whereas in later years, at the time that the preservative power of vaccination gradually declines, the number of the cases of typhus increases.

b. In respect to the further question—whether the liability to infection from scrofulous and tubercular affections is increased—we must remark that it is certainly undeniable that the state of fever which is produced by inoculation with vaccine lymph, and which is evidenced even long after the conclusion of the vaccine process by the continuation of the increased frequency of the pulse, may produce an aggravation of one of the diseases already named; but these slight disadvantages are, in comparison with the great safety secured, too unimportant to deserve particular notice.

The assertion often made, that now, after practicing vaccination for more than fifty years, through which more than half a million of human beings are yearly saved, scrofula, tubercle, and phthisis more frequently appear (and this to an extraordinary degree) than was the case before the introduction of vaccination, has to be explained, on one side, by the circumstance that here, where the population has

not for a long time been decimated, either by a continuation of war or important epidemics, it has very considerably increased, and accordingly more sick persons are to be found among them. On the other side, that, owing to vaccination, scrofulous, tubercular, and ricketty children are preserved from small-pox, to which disease they would otherwise have certainly fallen a prey.

The aforementioned cachexies are conveyed from parents to their children and grandchildren; and the experiment has been tried, in many places, of either postponing or entirely omitting the vaccination of scrofulous and ricketty children of such families, without the occurrence of these diseases being prevented.

c. As regards other injurious effects which may be caused by vaccination, they are limited in the great majority of cases to local disturbances, such as follicular or cutaneous inflammation, exudation, and suppuration. Bad results, such as erysipelas, gangrene, formation of abscesses, &c., occasionally occur, but are, nevertheless, to be considered as inevitable; and in every case, as soon as a cure has been effected, there is no fear of future evil results to the vaccinated person.

Third Question: "Has experience given grounds for belief or conjecture, that the lymph from a true Jennerian pustule may become the vehicle of scrofulous, syphilitic, or any other contagion which may affect the bodily constitution of the vaccinated person, or that the accidental inoculation with another disease, instead of the intended vaccination, may take place at the hands of a properly qualified medical practitioner?"

The contents of this comprehensive question also demand different answers, according to the information required, viz.:

a. Whether the lymph of a vaccine vesicle, in addition to its own peculiar contagion, can contain another infecting principle; *ex. gr.*, syphilis?

b. Whether constitutional, non-contagious diseases, *ex. gr.*, scrofula, may be conveyed by means of vaccination with cow-pox?

c. Whether a vaccine vesicle possesses such characters as to be easily distinguishable from other bladders, blisters, or pustules?

a. The contagious matters hitherto known which may be conveyed by inoculation reduce themselves to chancre-matter containing syphilitic virus, and the contagion contained in small-pox and vaccine vesicles; it remains therefore only to be considered whether these morbid animal products can combine, and whether a vaccination with them so combined has already taken place; and what have been the results of the same.

It is well known that comprehensive answers to these queries have for a long time existed. They were proposed in the Imperial Gen-

eral Hospital in the year 1855, and published in the March and April numbers of the periodical of the Imperial Society of Surgeons.

They are uniform in the opinion, that in cases of vaccination with secretions containing several peculiar descriptions of contagion, either it did not take at all, or, in a mixture of chancre matter and vaccine lymph, only chancre took; and on mixing vaccine lymph and blennorrhagic secretion, only cow-pox took. Thus only one disease was communicated, either small-pox or syphilis; a proof certainly that both contagions cannot be conveyed at the same time. Confirmatory of this are the experiments of Heim, Ricord, Bousquet, Taupin, Landanzy, &c., &c.

b. Although by many it is maintained that the blood of individuals affected with secondary syphilis can serve as a vehicle for this specific contagion, even this theory (if it could be proved) would not exercise any influence on the practice of vaccination; for both experiments made on purpose (Heim) and accidental vaccinations have taught that without considering the quality of the vaccine lymph, that taken from syphilitic subjects may have been used upon healthy persons, and the contrary, viz., from healthy individuals and used upon persons suffering from syphilis, without, on such occasions, the latter disease having been conveyed with the cow-pox. What has here been proved in reference to syphilis may be applied equally to all other dyscrasic diseases, since these, even in cases of direct vaccination with their morbid product, have always shown a negative result.

Even if it is proved without doubt that scrofula, tubercle, rickets, cancer, and other diseases of the blood are not conveyable, either of themselves or by means of vaccine lymph, still the vaccination of sick persons is, if possible, to be avoided, since experience has shown that both with children and adults the progress of the vaccination may be the cause of awaking slumbering ailments, or of aggravating them; further, that the vaccination vesicles with such individuals easily degenerate. Nevertheless, these are perfectly fit for the purpose of further vaccination, even in cases of imperfect generation; for if vaccine lymph taken from weak, scrofulous, and ricketty persons is used upon healthy persons, a complete taking, a more regular course, and more satisfactory safety against small-pox may be observed.

c. In the same manner that in every appearance of disease the general characteristic may be observed which distinguishes it from other similar diseases, so also do vaccine vesicles possess peculiarities enough in their form, size, number, the places in which they occur, and particularly in their progress, to distinguish them easily from other vesicular or pustular eruptions on the skin. So great a knowl-

edge is certainly not necessary to diagnose a vaccine vesicle, that one has not the right to presume with safety on such knowledge being possessed by every properly instructed medical practitioner.

Fourth Question : "Does experience warrant the recommendation (with the exception of special cases) that vaccination should be practiced at an early period of life ?"

This question put in the following form would be more short and distinct :

Should children be vaccinated during the first weeks or month of their life ; or later, say in the first or second year of their age ?

On this subject the experience of all time agrees. Since the time of Rhazes to the present day it is known to every medical man and every layman, that small-pox is so dangerous to none as to children, particularly to the non-vaccinated infants, newly born or at the breast.

Out of 195 children who died in the Imperial Foundling Hospital during the period of eleven years, from small-pox, (of whom 194 were non-vaccinated), 168 were in the first year of their age, 19 under two years, the remaining 7 under ten years.

The rate of mortality among the non-vaccinated small-pox patients in the Imperial General Hospital during the last twenty years, which for children from four to ten years of age was 40,2 per cent., fell for the next decennial period of life (viz., in respect of persons between eleven and twenty years of age) still more, as their mortality was but 20.4 per cent.

The two following decennial periods appear to bring more danger, as among non-vaccinated individuals of from twenty-one to thirty years of age the proportion of deaths was 36.6 per cent., and of those between thirty-one and forty it was 46.2 per cent.

The ages above forty-one produce too small a contigent to be a guide as to their rates of mortality. Of these latter four died, *i. e.*, 3.33 per cent.

In order to arrive at an idea as to the frequency of attacks of small-pox during the different periods of life, and the amount of safety secured by vaccination, we subjoin the following tables, which show the rates of mortality among the vaccinated and non-vaccinated patients of the General Hospital during the period above mentioned:

Ages.	Total number of cases.	VACCINATED.		NON-VAC'NATED	
		Cases.	Deaths.	Cases.	Deaths.
1 to 10 years	418	234	35	184	74
11 to 20 years	2,634	2,228	83	406	83
21 to 30 years	2,671	2,329	128	342	115
31 to 40 years	406	354	21	52	24
41 and upwards	84	72	4	12	4

Deaths per one hundred cases at each age, as follows :	1-10	11-20	21-30	31-40	41 and upwards
Among 5,217 vaccinated	14.9	3.7	5.6	5.9	5.5
Among 996 non-vaccinated	40	20.4	33.6	46.2	33.3

From these calculations may be deduced that the greatest number of small-pox cases occurs between the ages of 11 and 30; the greatest mortality, however, during the first year of life; then during the first decennium; and, next, between 31 and 40 years of age. If a comparison be made between the great percentage of non-vaccinated nurslings and little children who die from small-pox, and the small number of cases where vaccination has been prejudicial to health, or has caused derangement of the system, the preponderance is greatly in favor of early vaccination; for in the Imperial Foundling Hospital and Vaccination Institutes, 1,000 vaccinations take place yearly on children a few weeks old without the health of these infants being prejudiced, or the vaccine lymph deteriorating in quality.

The Society accordingly expresses its opinion that vaccination not only may be practiced without danger upon children but a few weeks old, but even *ought* to be so practiced, in order to preserve nurslings from danger of contagion from small-pox.

CARL ROKITANSKY, *President*,
KARL SCHROFF, *Vice President*.

JOS. SKODA,
FRED. HEBRA,
Reporters.

2. REPORT OF THE FACULTY OF MEDICINE AT PRAGUE.

To the Minister of the Interior:

The undersigned, College of Doctors of the Faculty of Medicine of the City of Prague (College of Surgeons,) in fulfillment of an order dated 18th November, 1856, $\frac{28191}{22114}$, viz: to procure replies to the question submitted by the Government of Great Britain relative to vaccination, has the honor to remark to the Ministry, as premise to the following statements, that in consequence of the importance of the subject, it feels itself compelled to adhere solely to well-founded facts and the known results of experience, and supported by these alone, setting aside all theoretical and subjective remarks, to make use of such results and data alone as appear adapted to answer the different points in these questions, in accordance with the present state of scientific knowledge.

I. Has experience, &c., &c., taught that successful vaccination acts as a complete preventive against the small-pox, and secures an almost certain safety from death occurring through this disease?

The answer to this question, which most closely touches the principle of cow-pox vaccination, is to be arrived at by means of the official data shown in the four annexed tables.

Table I., showing the number of population, the general amount of mortality, and particularly from small-pox, during the seven-year

epoch, from 1796 to 1802, at which time cow-pox vaccination was either not practiced at all in Bohemia, or at any rate not in the extensive manner in which it is practiced in the present day.

Table II., showing the same data after the general introduction of vaccination into Bohemia, for the period of 24 years, from 1832 to 1855.

These two tables are compiled from the official bills of mortality, with the exception of the year 1855, for which year (the official list not being completed) the total number of deaths was assumed to be the same as the preceding year.

Table III., showing the number of deaths among the vaccinated and non-vaccinated, the number of both, who sickened and died from small-pox during the period of 21 years, from 1835 to 1855.

The discrepancy between the deaths from small-pox in this table and those in the former, No. II., is to be explained by the fact of the latter being taken from the general returns of deaths, in which those cases are included which have been returned by non-professional "examiners of the dead," who frequently enough look upon every disease in the form of an eruption on the skin as small-pox, and accordingly consider this disease as having been intimately connected with the cause of death, whilst the statement in Table III, is prepared from the return of the vaccinating surgeon, and has therefore more pretension to be worthy of credence.

This difference is in so far of little importance that in No. III Table all vaccinated individuals who died are, to a certain degree, charged to vaccination, whereas only those who were successfully vaccinated should have been so charged.

If proof of the latter could be given, and if it were possible in Table II. to give the number of population of each year, the proportion of small-pox and death to the population in general, on the one hand, and that of the cases of small-pox to the successfully vaccinated on the other hand, would present itself in a much more favorable light.

Table IV. contains a statement as to revaccination during the last sixteen years, from 1840 to 1855, in comparison with vaccination, and would seem to show that, in the majority of cases, at the time of ravaccination the effect of the first vaccination had not yet ceased.

From these tables, it appears—

1. That according to I. and II. the total number of deaths, as well before as after the introduction of vaccination with cow-pox, was 1.32 to the number of the population.

2. Before the general practice of vaccination, there occurred one death from small-pox in $12\frac{1}{3}$ deaths in general, and in $396\frac{2}{3}$ souls;

but after the general introduction of vaccination, the proportion fell to one death from small-pox in 457¾ deaths in general; and in 14,741⅓ souls: therefore,

3. The proportion at the present time of deaths from small-pox to the deaths in general is thirty-eight times, and to the population thirty-seven times more favorable.

4. The lowest number of deaths from small-pox before the introduction of vaccination (1988) is 2⅓ times greater than the highest number since the introduction of vaccination (807,) therefore the highest number of deaths from small-pox before the introduction of vaccination (17,587) is 21⅘ times greater than the highest number of deaths since the introduction of vaccination (807;) and further,

5. According to Table III., there occurs on the average one case of sickness from small-pox in 367⅔, and one case of death from small-pox in 7,166⅓ among the vaccinated, while among the non-vaccinated one in 12⅓ was taken ill with the small-pox, and one in 40⅔ died from that disease; thus the nineteenth part of the vaccinated, but the third part of the non-vaccinated died from small-pox, and of the non-vaccinated thirty times the number were taken ill with, and 179 times the number died, from the small-pox, than of the vaccinated.

6. According to Table IV., in cases of revaccination, among 100 revaccinated individuals, 38⅘, *i. e.*, somewhat above one-third of the revaccinations, proved successful, with 59⅘ no success was obtained, with 1⅘ the result remained unknown; while among 100 vaccinations, 97⅝ were successful, 2 no result, and ⅖ the result remained unknown; therefore the proportion of successful revaccination to vaccination cases is proved to be as 1 to 2¼. To this calculation, the experience obtained in our city hospitals and by private practitioners not only offers no contradiction whatever, but on the contrary, it is even more favorable.

In the Imperial General Hospital of Prague during ten years, from 1847 to 1856, 872 persons were treated for small-pox; of these, 819 had been successfully vaccinated, and 43 unsuccessfully or not at all. With 10 the vaccination, or its result, could not be ascertained in a manner to be relied upon. Here must be particularly remarked, that in 1847, in the aforementioned institution, not one case of small-pox is recorded.

Out of the 872 patients, 63 died, and of this number 41 were of those who were described as successfully vaccinated, 20 as vaccinated without success, and two as those concerning whose vaccination nothing certain was known.

Leaving alone those concerning whose vaccination nothing could with certainty be said, it is here shown that of the successfully vacci-

nated the twentieth part died; of the unsuccessfully vaccinated the half, while the number of vaccinated patients was nineteen times greater than that of the non-vaccinated.

In the Hospital of the Brothers of Mercy at Prague, during the years 1847 to 1856 inclusive, 410 patients were treated for small-pox; of these, 370 were vaccinated, and only 40 non-vaccinated. Of the vaccinated 4 died; of the non-vaccinated 5 died.

Of the vaccinated (the success or non-success of the vaccination not being taken into consideration) the 92d part died, of the non-vaccinated the 8th part died, while the number of the vaccinated was $9\frac{1}{4}$ times greater than that of the non-vaccinated.

In the Emperor Francis Joseph's Children's Hospital, at Prague, between the years 1854 and 1856, *i. e.*, during a period of three years, 263 sick children were treated for small-pox; of these, 75 were vaccinated, and 188 non-vaccinated. Of the vaccinated none died; of the non-vaccinated 30 died; that is to say, almost 16 per cent.

In the Elizabethan Hospital in Prague, during six years, from 1851 to 1856, 118 cases of small-pox were admitted; of these, 108 were vaccinated and 10 non-vaccinated. Of the vaccinated 2 died, of the non-vaccinated 1 died; *i. e.*, $\frac{1}{54}$ of the vaccinated, and $\frac{1}{10}$ of the non-vaccinated, the vaccinated patients being $10\frac{4}{5}$ times the number of the non-vaccinated.

In the opinion of the undersigned College of Surgeons the whole of the foregoing information justifies the following conclusions:

1. Small-pox not only may, but does, attack even persons who have been successfully vaccinated.

2. Death from small-pox occurs not only with non-vaccinated but also with vaccinated individuals.

3. Vaccination with cow-pox does not, therefore, secure a certain safety from small-pox.

4. The number of small-pox cases in general (vaccinated and non-vaccinated) in proportion to the number of the population, is at the present time unproportionably smaller than before the introduction of vaccination.

5. If the proportion of small-pox patients who have been vaccinated greatly exceeds that of those who have not been vaccinated, this fact must not be lost sight of, that in the present day (in this country) the population of non-vaccinated individuals is very much smaller, and with the spread of vaccination for cow-pox, it decreases each year.

6. The greatest number of small-pox cases which terminate fatally in the present day is not only much lower than the highest number during a like period in times before the introduction of vaccination,

but even in an extraordinary degree lower than even the lowest number in such former times.

7. The great variability of the small-pox cases, and deaths observed in the different years in Table III., shows that now, as formerly, the small-pox at times takes a greater range; at the same time experience teaches,

8. That in comparison a greater number of non-vaccinated persons (notwithstanding their great minority) are attacked with small-pox, and die, in almost the same proportion, as before the introduction of vaccination; while,

9. As regards vaccinated persons, notwithstanding their overwhelming majority, the favorable comparison shows itself in an extraordinary manner, insomuch as the cases which terminate fatally may almost be termed singular, when it is taken into consideration, that in forming these conclusions, only the successful cases of vaccination could be reckoned.

10. As regards the preventive power of vaccine, the result and proportion of vaccination on non-vaccinated (vaccination) and vaccination on vaccinated persons (revaccination,) may be referred to, vaccination being with the great majority of the latter unsuccessful.

11. According to what has already been shown, there appears such a striking difference in the proportion of sickness and death from small-pox before and after the introduction of vaccination, and with vaccinated and non-vaccinated persons, that every unbiased individual can figure to himself the answer to the first question proposed.

12. It is undeniable, and not to be contradicted, that vaccination as a measure of safety against small-pox is of great value, that vaccination produces relative safety against this disease, and that death from small-pox is of seldom occurrence among vaccinated individuals.

II. Has the experience, &c., &c., given grounds for belief or presumption that vaccinated persons, who are therefrom less liable to infection from small-pox, are more liable to infection from typhus fever, or any other contagious disease, or to scrofula, or phthisis, or that their health is injuriously affected in any other manner?

There is no well-grounded fact known which would justify the assumption that vaccinated persons are more liable to typhus or other contagious diseases, or to scrofula or phthisis, than non-vaccinated persons, or that the health is in any way injuriously acted upon by vaccination.

Typhus fever and other contagious diseases, scrofula, and tubercle, if these diseases here and there appear, are occasioned by quite different causes, which up to the present time are just as far from having been discovered as the cause of the small-pox itself.

Particularly the origin of scrofula and tubercle is found in the social condition generally, and especially in some classes of the human race, in a much more important moment than that of pox vaccination in addition, the non-vaccinated are (at least in this country) just as often attacked with typhus and other contagious diseases with scrofula and tubercle, as the vaccinated majority.

III. Has the experience, &c., &c., given grounds for belief or conjecture, that the lymph of a true Jennerian pustule can become the vehicle for the conveyance of syphilitic, scrofulous, or any other contagion which may affect the bodily constitution of the vaccinated person, or that the accidental inoculation of another disease, in lieu of the intended vaccination, can take place by the hands of a properly educated medical practitioner?

The experience obtained in this country gives no grounds which lead either to the belief or presumption that the consequence to a vaccinated person can be such as put forth in this question.

The conveyance of scrofula, tubercle, or other contagious matter which may affect the bodily constitution by means of vaccination has never yet been proved.

The possibility of inoculation with syphilis by means of vaccination is (although not a single completely attested fact is known in this country,) still not to be excluded; for the conveyance of syphilis by means of inoculation has been placed beyond a doubt.

An accidental inoculation with other contagious matter, instead of the intended vaccination, by the hands of a properly educated medical practitioner, is less to be feared than want of strict caution and circumspection in the choice of individuals from whom the cow-pox lymph is to be taken, for the purpose of further vaccination, which is made the duty in particular of a vaccinating surgeon.

IV. Does the experience, &c., warrant that, with the exception of some individual special cases, vaccination in general should be practiced at an early period of life?

In addition to the reasons in favor of vaccination already given, its practice at an early period of life the more deserves recommendation, that experience shows how especially liable youthful individuals in general are to every description of acute exanthemen, and therefore certainly to small-pox.

Exceptions in individual cases, and for special reasons, are always to be made, as appears in the official vaccination instructions issued in Austria.

Experience at any rate justifies the conclusion, that, as the age of childhood, before the introduction of vaccination delivered the so disproportionate contingent to the numerous cases of small-pox and

mortality arising therefrom, the neglect of vaccination during the early period of life is a dangerous experiment for mankind.

In conclusion, the undersigned College of Surgeons adds. that the herein contained opinions are completely in unison with those expressed and sent in by other members of the faculty, in consequence of official requisition made to them on this subject.

I.

Population, Total Deaths, and Deaths by Small-pox, during seven years before the general Introduction of Vaccination.

Year.	Population.	Deaths.		Remarks.
		Total No.	From small-pox.	
1796	3,003,482	92,242	6,686	The proportion of the deaths generally to population = 1:32.
1797	2,991,346	86,885	1,988	
1798	3,045,926	84,743	3,105	
1799	3,041,608	99,079	17,587	Deaths from small-pox to population = 1:396⅔.
1800	3,047,740	110,730	17,077	
1801	3,036,481	105,576	3,169	Deaths from small-pox to the total number of deaths = 1:12½.
1802	3,111,472	85,460	4,029	
Total..	21,278,055	664,685	53,641	
Average	3,039,722.1-7	94,955	7,663	

II.

During twenty-four years subsequent to Introduction of Vaccination.

Year.	Population.	Deaths.		Remarks.
		Total No.	From small-pox.	
1832	3,888,828	139,061	807	The proportion of the total number of deaths to population = 1:32⅕.
1833		121,697	533	
1834	3,945 875	122,171	285	
1835		122,952	337	
1836		124,015	291	Deaths from small-pox to population = 1:14,741⅓.
1837	4,027,581	141,982	104	
1838		108,419	62	Deaths from small-pox to total number of deaths = 1:457¾.
1839		121.400	128	
1840	4,145,715	118.471	699	
1841		116,575	697	
1842		124,019	339	
1843	4,285,730	142,876	332	1. The population of each year cannot be given, as a census only takes place every three years.
1844		113,184	150	
1845		178,826	62	
1846	4,480,661	132,379	59	
1847		134,490	9	
1848		141,409	115	2. As regards the number of deaths in Nos. I. II., they are gathered from the General Lists of Mortality.
1849	4,613,080	131,493	383	
1850		176,211	478	
1851		133,245	508	
1852		134.921	343	
1853		124,617	42	
1854	4,593,770	124,746	68	
1855		(124,746)	64	
Total...	33,985,240	3,153,905	6,895	
Averag.	4,248,155	131,412.17-24	287.7-24	

III.

Vaccinated and Non-vaccinated Cases of Small-pox which terminated fatally, according to Official Vaccination Return (twenty-one years.)

YEAR.	Cases of vaccination.	Remaining non-vaccinated (*)	SMALL-POX.				Remarks.
			Cases.		Deaths.		
			Vaccinated.	Non-vaccinated.	Vaccinated.	Non-vaccinated.	
1835	132,727	4,029	505	430	20	136	One case of small-pox occurs among $367\frac{3}{4}$ vaccinated. $12\frac{1}{3}$ non-vaccinated.
1836	130,194	3,319	374	215	26	64	
1837	126,123	3,971	57	123	4	52	
1838	133,527	3,967	101	96	15	32	
1839	132,523	3,906	160	168	20	70	
1840	140,898	3,585	1,138	966	89	351	One fatal case of small-pox occurs among $7166\frac{1}{4}$ vaccinated. $40\frac{2}{3}$ non-vaccinated.
1841	139,471	3,482	1,583	1,522	83	382	
1842	142,970	3,180	681	703	39	208	
1843	142,314	2,874	627	714	21	229	
1844	126,647	6,109	61	148	7	43	
1845	149,612	6,410	55	63	2	25	
1846	146,467	5,475	6	50	..	7	Among cases of small-pox died the 19th part of the vaccinated. 3d do do
1847	141,268	5,361	19	25	..	4	
1848	132,320	5,718	227	169	17	49	
1849	139,523	5,704	575	645	63	177	
1850	156,561	6,314	568	374	14	131	
1851	152,294	4,694	16	293	3	43	
1852	161,364	3,689	252	231	12	65	
1853	145,028	3,067	327	168	3	39	
1854	161,313	2,927	457	203	7	61	
1855	156,424	2,349	389	156	8	56	
Total	3,005,578	90,130	8,178	7,462	423	2,221	
Average	$143,122\frac{16}{21}$	$4,291\frac{19}{21}$	$389\frac{9}{21}$	$355\frac{7}{21}$	$20\frac{3}{21}$	$105\frac{19}{21}$	

(*) Note.—I presume that "ungeimpft verbliebene" in the third column is intended to denote (in comparison with the total births of the year) the number of infants who remain unvaccinated at the end of the legally specified time.—[J. S.

IV.

Comparative Statistics of Vaccination and Revaccination (sixteen years).

YEAR.	Number of vaccinations.	RESULTS.			Number of revaccinations.	RESULTS.			Remarks.
		Successful.	Unsuccessful.	Not known.		Successful.	Unsuccessful.	Not known.	
1840	140,898	135,681	5,217	....	167	47	74	46	Of 100 revaccinations:
1841	139,474	134,522	5,949	....	16,166	6,183	9,983	....	$38\frac{4}{5}$ with result.
1842	142,970	139,065	3,905	....	1,439	408	1,031	....	
1843	142,314	138,370	3,944	....	11,436	4,972	6,464	....	$\frac{2}{5}$ without result.
1844	126,647	123,104	2,598	945	3,393	1,638	1,582	173	
1845	149,612	146,153	2,577	882	4,589	1,698	2,755	136	$1\frac{4}{5}$ result unknown.
1846	146,467	143,663	2,270	525	8,156	3,357	4,546	253	
1847	141,286	138,824	2,017	445	6,894	2,461	4,256	177	Of 100 vaccinations:
1848	132,320	129,852	2,000	468	3,977	1,974	1,955	48	$97\frac{5}{7}$ with result.
1849	139,523	138,881	2,158	484	8,641	3,981	4,474	186	
1850	156,561	153,419	2,336	806	11,290	4,677	6,303	310	2 without result.
1851	152,294	149,094	2,604	596	13,194	5,122	7,950	122	
1852	161,364	158,025	2,766	573	26,693	11,341	14,806	546	$\frac{2}{7}$ result unknown.
1853	145,038	142,276	2,360	402	19,837	7,806	11,633	398	
1854	161,313	158,629	2,386	298	25,062	9,030	15,660	353	Proportion of success:
1855	136,424	134,083	2,031	310	25,850	7,395	16,783	672	Revaccinated to vaccinated = 1 : $2\frac{1}{4}$.
Total	2,314,502	2,261,641	46,127	6,734	185,874	72,099	110,256	3,420	Proportion unsuccessful: Vaccinated to revaccinated = $2\frac{1}{3}$.
Average	$144,656\frac{6}{16}$	$141,352\frac{9}{16}$	$2,882\frac{15}{16}$	$420\frac{14}{16}$	$11,617\frac{2}{16}$	$4,506\frac{3}{16}$	$6,890\frac{15}{16}$	$213\frac{11}{16}$	

3. REPORT OF THE IMPERIAL GENERAL HOSPITAL OF VIENNA.

In discharge of the commissions given by the Ministry of the Interior, dated 27th November, 1856, No. 25,191, and by the Stadtholdership of Lower Austria, dated 3d instant, No. 54,604, the undersigned, in concurrence with the head of the department for treating diseases of the skin, Professor Dr. Hebra, has the honor to make the following report:

The First Question: "Whether experience has taught that successful vaccination acts as a complete preventive against the small-pox, or secures an almost certain safety from death occurring through this disease," must, as experience has shown, be answered thus: (*a*) That vaccination has no absolute preventive power against small-pox, and (*b*) That vaccinated persons may die from small-pox; nevertheless the following figures speak in favor of the adoption of vaccination.

In the course of the last five years (*i. e.*, from the 1st January 1851, until the end of December, 1855, as shown in the accompanying Table) 2,239 patients were treated for small-pox, in the department for diseases of the skin of the Imperial General Hospital of this city; of this number 1,995 had been vaccinated, and 244 were non-vaccinated.

Of the vaccinated seventy six died during this period, while of the non-vaccinated seventy-one died; therefore the mortality among the vaccinated was 3.80 per cent., while among the non-vaccinated it amounted to 29.09 per cent.; so that among every hundred of the non-vaccinated patients there were nearly twenty-six more deaths than among the same number of vaccinated patients.

Even successful vaccination, then, does not act as an absolute preventive against small-pox, nor against death occurring from this disease; but the course of the disease is much less dangerous to vaccinated persons, and therefore less fatal to them than to non-vaccinated persons.

The Second Question: "Whether vaccinated persons are more disposed to typhus or other contagious diseases, or to scrofula and phthisis, than the non-vaccinated," can only be answered by statistical data, but as these are not at hand very little can be positively proved respecting this point; for, in reference to this subject, the past rather than the present must be consulted, and medical evidence taken from history is, in the present day, only of value when it can be borne out and strengthened by observation.

For example, if in medical reports of the last century the diagnosis of typhus is more seldom present than in those of the present day, it is still no proof that in the eighteenth century, when vaccina-

tion was unknown, fewer cases of typhus occurred than in the nineteenth century, *i. e.*, after the introduction of vaccination; for, in the former period, in addition to typhus, *febris nervosa*, *putrida*, *mucosa*, *pituitosa*, &c., were reckoned as separate causes of death, which nowadays no longer have those distinctive appellations, having proved at the dissecting table to be typhus cases of different grades.

The sum of the Third Question must be divided into two parts, and must be answered: (*a*) "Whether the Jennerian vesicle (vaccine efflorescency) can contain, in addition to its own *contagium*, the means of infecting with syphilis, scrofula," &c., and (*b*) "Whether the vaccine efflorescency possesses such a distinctive character that a medical practitioner can, under other circumstances, easily distinguish it from syphilis or scrofula."

As regards the first part of this question: to grant that two descriptions of contagious matter can exist in one efflorescency would be in contradiction of all experience, up to the present time, relative to the conveyance of disease; for just as little as one could, by inoculation with variola or chancre-pus, produce any other disease than small-pox or syphilis, even so little can the contents of a vaccine pustule produce anything else than a vaccine efflorescency; whether the lymph shall have been taken from a healthy, a scorbutic, scrofulous, tuberculous, or any other subject.

To this opinion surgeons of all countries who have practiced vaccination for the cow-pox will give their adhesion; as is shown by the experiments of a Taupin, Landanzy, Bousquet, Heim, and Friedinger.*

The second part of the third question is answered by stating that the character and progress of a true Jennerian pustule is peculiar and easy to be recognised, and there is no fear of its being mistaken for any other (scrofulous or syphilitic) efflorescency by any practitioner who has had any experience at all in this matter.

The Fourth Question: "Whether vaccination in general is to be recommended, and if it should be practised upon children of a tender age," is already partly answered by the foregoing; and it only remains to treat specially the question. "whether vaccination should be practiced generally at an early period of life."

The history of the small-pox, commencing with Rhazes up to the present time, proves most uncontradictorily that to none is variola so dangerous as to newly-born children or sucking babes. During every small-pox epidemic which broke out before the discovery of vaccination, little children were carried off by thousands: and at the present time we can observe this fact when small-pox epidemic breaks

* Die Blattern-Krankheit, &c., von Chr. H. Einer, Leipzig, 1853.

out in such countries as Turkey, or among negroes or Indians, where vaccination is not general.

The undersigned has also learnt the same from experience, as during the past year nearly all the non-vaccinated nurslings who were brought to the small-pox department of the Imperial General Hospital of this city from the Lying-in and Foundling Hospitals, suffering from small-pox, died of this disease.

As the vaccination of the very young children belonging to the Foundling Hospital, as well as those belonging to that establishment out at nurse, has not proved up to the present time in any respect detrimental to them, and as they have gone through the vaccination process without its causing any lasting disturbance to their health, it clearly shows not only that vaccination for the cow-pox may without danger be practiced upon any healthy child, if even but a few weeks old, but further, that in order to prevent infection from small-pox such vaccination ought to take place.

As, in addition to the questions preferred by the English Government, the Stadtholdership of Lower Austria has added the Commission to give "the data relative to the result of vaccination practiced more than ten years ago," the undersigned considers that he best meets their views by giving a table of the ages of the 2,239 individuals who, during the years 1851 to 1855, were treated in the Imperial General Hospital of this city for small-pox, from which it appears that the great majority of small-pox patients were between the ages of 11 and 30.

Now, as the great majority of persons are vaccinated at an early age, it appears that the preservative power of vaccination lasts from ten to fifteen years.

It also appears from this statistical statement that from ten to thirty years of age one is most liable to infection from small-pox, and that this liability in later years gradually decreases, but even in old age never entirely ceases.

Comparison of the Number of Cases of Small-pox which were treated in the General Hospital at Vienna during the Five years, 1851–5 inclusive, as regards the ages of the Patients and the number of the Cases which terminated Fatally.

Age of patients.	Vaccinated.		Not Vaccinated.	
	Total number.	Number of deaths.	Total number.	Number of deaths.
To 10 years of age	54	8	34	15
From 11 to 20	834	16	111	25
do 21 to 30	892	43	83	23
do 31 to 40	171	7	10	5
do 41 to 50	35	1	3	3
do 51 to 60	9	1	8	..
Total	1,995	76	244	71

The number of cases of variola in various forms was 2,239, namely,

Who had been vaccinated	1,995
Who had not been vaccinated	244

Vaccinated as well as non-vaccinated persons were seized with the small-pox; still, with this difference, that of the vaccinated cases $8\frac{1}{3}$ per cent., but of the non-vaccinated 33.3 per cent. were cases of variola vera.

Of the 1,995 vaccinated cases 76, and of the 244 non-vaccinated cases 71, terminated fatally.

To the civilized classes of society this once terrible disease has almost ceased to be fatal, and this fact is calculated to make them forget the terror its very name begot in former generations. It is said that there were two words which Prince Kaunitz would not allow to be uttered in his presence—"death" was one, "small-pox" the other. Like the plague I have briefly described, it depopulated whole countries. The disease, under such circumstances, must have ravaged more fiercely than the most ruthless of human wars. Its effects on mankind must have been comparable to that utter obliteration of vegetable life which ensues when the army of locusts, descending on pastures and vineyards, and sweeping onward in fatal procession, converts into a desert what just before was all freshness and fertility.

In every country, probably, its first invasion has been of this kind; and its recurrence, when far apart, has been of equal malignity. Thus it was that in 1518, following European adventure to the Western World, it concurred with fire and sword, and famine, and blood-hounds, to complete the depopulation of St. Domingo; thus, soon afterwards, in Mexico, it even surpassed the cruelties of conquest, suddenly smiting down three and a half millions of population and leaving none to bury them. Thus, in Brazil, in 1563, it extirpated whole races of men; thus, about the same period, in the single province of Quito, it destroyed upward of 100,000 Indians. And thus, too, it has been in later days that Siberia and Kamschatka have been ravaged; thus, again and again, till very recently, the same dreadful pestilence has depopulated Greenland and Iceland. Captain Cook describes its ravages in these countries as not less dreadful than the plague, seeming to threaten their entire extirpation. Before the terror of its presence communities literally dissolved themselves, and the well-known description of the plague at Athens does not convey more dreadful images of human suffering than may be gathered from the writings of those travelers who, even to the latest times, have witnessed the power of natural small-pox against remote unprotected populations.

In Iceland the disease has been known for many centuries. In 1707, when it had visited that country for the eighteenth time, it is said to have destroyed 18,000 persons out of a population of 50,000. "Empty houses and unburied corpses, some within and some without the depopulated houses," are described; and "in one island they found only one girl, with the small-pox upon her, and her three little brothers; the father, having first buried all the people in the place, had laid himself and his smallest sick child in a grave," raised with stone, and ordered the girl to cover him.

Whole tribes of Indians have been cut off by this disease, in early days, in our own country.

While such was small-pox in the less traveled parts of the world, it seems certain that in civilized Europe, with its constant intercourse of towns and counties, the disease was at least as deadly. Its strength, indeed, was differently distributed; not, as in Greenland, twice or thrice in a century, but incessantly that fatal sickle was in motion, and the harvest counted from day to day. Instead of coming after long intervals, on masses of population entirely unprotected against the infection, it recurred in each place so frequently that, for the most part, at any given moment, a more or less considerable majority of the inhabitants would have faced the danger before they would have attained against its attacks that protective exemption which was generally the good fortune of survivors. But it is a moderate computation, that for every five persons thus, at the price of much past suffering almost secured against the disease, one at least must have died. The annual ravages of small-pox in Europe alone have been estimated at half a million of lives. M. De la Condamine reckoned that in France a tenth of the deaths was by small-pox, or one hundred and fifty thousand per annum. Rosen's estimate of Sweden was to the same effect. In England the records were imperfect, but it was computed in London, when not at the worst, to be one-fourteenth. The father and mother of William III. died of small-pox, as well as many others of royal families.

The ravages of small-pox are not all enumerated in the list of the myriads whom it killed. From the earliest to the latest medical records of the disease, there is constant mention of the tax which it levied upon survivors. "Among those who outlive it," says De la Condamine, "many either totally or partly lose their sight or hearing; many are left consumptive, weakly, sickly or maimed; many are disfigured for life by horrid scars, and become shocking objects to those who approach them. Immense numbers lose their eyesight by it."

It is scarcely needful to say of the disease I have described, that it was among all civilized nations a constant source of terror. Each

time that the contagion was reintroduced into a particular locality all who had not been touched in previous visitations (including especially such children as had been born in the interval) might expect to become subjects of attack. Accident in individual cases might delay this dangerous moment, but for nearly all it was only delay. A remarkable instance of the non-susceptibility of disease possessed by some is related in the case of a nurse in a small-pox hospital in London; this individual had officiated in this capacity for *twelve years*, continually waiting upon the patients who were undergoing the disease, and at the end of that time he caught the small-pox, of which he died.

Of persons not prematurely cut off by other diseases, in the long run very few escaped the infection. Seventy years of age was no security; and for such as were disposed to triumph at the end of an epidemic which had spared them, there was often quoted the old saw, *Nemo ante obitum beatus*. Thus, at every rumor of the disease, men might tremble for the valuable lives of others, or for their own; and that horror of the living patient, which so loathsome an affliction occasioned, became, when death had ended his sufferings, a very panic toward his corpse.

In London the deaths in two periods—one beginning with 1567 and ending with 1586, the other beginning with 1701 and ending with 1722—in all forty-two years, were 65,079, or 72 in 1,000; the average per annum in these forty-two years was 1,550. In another period of forty-two years, from 1731 to 1772, inclusive, the number was 89,628, or 89 in 1,000; the medium number of deaths for each of these years was 2,134, an annual increase of 584. This last forty-two years, it will be remembered, was posterior to the introduction of inoculation, the era of which was about the year 1722. In the first eight years from thence to 1731 the little ground which it had gained, and the care taken to prevent the infection from spreading, made, it may be presumed, very little alteration in the fatality of the disorder. In the twelve years from 1731 to 1742, inclusive, the average proportion of deaths by small-pox is 74 in 1,000; in the succeeding ten years, it is 83; in the next ten, it is 96; and in the following ten, when the disease and the method of treating it are supposed to be better understood than ever, it increased to 109.

Does not this intimate connection between the progress of inoculation and the destructive increase of the small-pox lead to the suspicion that the one is, in some degree at least, influenced by the other? In a period of *four* years, from 1767 to 1771, *both inclusive*, the deaths were 8,642—2,160 being the medium number per year; and

in four subsequent years 10,179; the medium for each year of this period is 2,544, an increase which was truly alarming.

The above calculations, founded upon authentic evidence, clearly show that the mortality by small-pox has not been reduced by inoculation; but rather, since the era of that practice, or soon after, there appears to have been a considerable annual increase of deaths in London for several years. The same increase in towns and country districts took place when the disease was epidemic. There is a variety of reasons assigned for it.

And now, for the first time, there came the story that we could, so to speak, make terms with this loathsome and murderous enemy; that by receiving it by our own accord we could disarm it; that we could (as it was expressed) "buy the small-pox" cheap; that the susceptibility to contract its fatal infection could be exhausted by artificial means, giving, indeed, the disease, but giving it so mildly that life was almost unendangered in the process.

This, indeed, was substantially the fact; and to the present time it remains one of the most interesting and least explained facts in pathology, that the specific contagion of small-pox, so uncontrollable in its operations when it enters a man in the ordinary way of his breathing an infected atmosphere, becomes for the most part disarmed of its virulence when it is artificially introduced into the system through a puncture of the skin; so that a person exposed to this artificial infection very generally contracts the disease in its mildest and most tractable form.

The motive for the practice of inoculation was to modify the violence of the disease and to render it more amenable to cure; and it is said that (notwithstanding the mortality, as above described, was increased at a certain time), "its efficacy in mitigating the severity and danger of the disease, in saving life, and preventing deformity, was signally great."

Inoculation, or *ingrafting*, as it was originally called, is said to have been done by the Brahmins time out of mind. It was also practiced in Turkey at the beginning of the seventeenth century.

The Chinese claim to have been in the habit, for many centuries, of *sowing* the disease, by putting some of the crusts into the nostrils. But this is a different thing from inoculation.

The first introduction of inoculation in Great Britain was, as above remarked, in the early part of the eighteenth century, but did not gain general use until near the middle.

The mortality in the natural small-pox was estimated at one in five. Dr. Jurin, in 1722, calculated that of the whole bulk of mankind, taken at two years of age, the eighth part will die of the

natural small-pox. In London, in 1721, in 1,000 infants, 386 died under two years of age, which is greatly above one-third of the whole.

The following table shows the deaths by small-pox in London in each year, from 1661 to 1684, inclusive :

Deaths by the natural Small-pox in London, from 1661 *to* 1684, *both inclusive.*

Year.	Deaths.	Year.	Deaths.
1661	1,246	1673	1,116
1662	768	1674	853
1663	411	1675	2,507
1664	1,233	1676	359
1665	655	1677	1,678
1666	38	1678	1,798
1667	1,196	1679	1,967
1668	1,987	1680	689
1669	951	1681	508
1670	1,465	1682	2,204
1671	1,465	1683	1,793
1672	696	1684	891
Total in twenty-four years			28,479

As above remarked, the deaths in the natural small-pox were estimated at one in five. But it was declared by eminent physicians, in the days of inoculation, that not more than one in five hundred died of the ingrafted disease. The discovery of Jenner has rendered the inoculation of small-pox not merely unnecessary, but perfectly unjustifiable in almost every instance.

THE ORIGIN OF VACCINATION.

There was a popular belief among the work-hands on the dairy-farms in Gloucestershire, England, that no person who had the cow-pox would be affected by the small-pox (this was an eruptive disease communicated from the udder of the cow to the hands of the milker). This was found to be no fanciful idea, and led to the discovery of vaccination, which placed the discoverer of it among the most illustrious benefactors of mankind. Dr. Jenner, seeing the results of the cow-pox, tested its merits by experiments. He inoculated the matter taken from a cow upon a person who never had been affected with small-pox, to ascertain if it would afford the desired protection. His experiments were crowned with entire success.

The first time this practice was put into operation was May 14, 1796. The great benefits resulting from it are too well known to require special notice. In 1799 vaccination was commenced in this country, and confidence was so rapidly attained in its prophylactic powers that it extended to every part of the earth, and, for the time, it seemed to Jenner and others that the loathsome disease could be entirely extirminated. The opinion is entertained still by some, but results have proved this theory illusory.

The following table, taken from the London Hospital and other places, confirms the latter view :

Rate of mortality of Small-pox, after vaccination, at different periods in different Parts of the World.

Location.	Cases.	Deaths.	Per cent of deaths.
Small-pox hospital, London, 1826 to 1832	619	40	7
do do 1833 to 1839	900	60	7
do do 1840 to 1844	1,011	64	6½
Total from 1826 to 1844	2,530	164	7
British army, 1831 to 1838	1,025	120	12
Copenhagen, 1824 to 1835	3,093	66	2
Wurtemberg, 1831 to 1836	1,055	75	7
Vienna, 1836	200	16	8
Ceylon (epidemic) 1830	260	34	13
Ceylon, 1833 to 1834	341	23	7
Total	8,054	500	6

These statistics were taken from the most reliable source possible. The notes and records of cases admitted into the London Hospital are exceedingly minute and correct.

The above table contains dates some years past, but fully defines the point nevertheless. Enough has been shown to prove that vaccination will not always protect every person from an attack of small-pox, consequently will not entirely eradicate the disease, for the reason that a person having *varioloid*, coming in contact with a person who has neither been vaccinated nor had the small-pox, will take the genuine natural small-pox, and so communicate it to all who may come in his way that are unprotected: and further, *having the natural or modified small-pox will not in all cases protect the person.**

The following table fully substantiates this doctrine:

Comparative Mortality of Small-pox after Small-pox, and of Small-pox after Vaccination.

AUTHORITIES.	SMALL-POX AFTER SMALL-POX.			SMALL-POX AFTER VACCINATION.		
	No. of cases.	Deaths.	Ratio of deaths to 100 cases.	No. of cases.	Deaths.	Ratio of deaths to 100 cases.
Thompson, Edinburgh	71	3	4.2	310	1	0.3
Chelsea Military Asylum	26	3	11.5	24	0	0.0
Heim, Wurtemberg	39	14	35.8	147	42	28.5
Bosquet, Marseilles	20	4	20.0	2,000	20	1.0
Gregory, London	9	2	22.2	789	46	5.8
Total	165	26	15.7	3,270	109	3.3

It thus appears that, while they who take small-pox a second time die in the proportion of 15.7 in the 100, they who take small-pox after vaccination die only in the proportion of 3.3 in the 100—a proportion absolutely lower than the mortality of the mildest disease.

To guard against the presumed loss of protective power, it has

* Dunglison's Prac. Med., vol. ii, page 588.

been extensively urged that revaccination should be practiced; but on this point there has been difference of sentiment—some regarding it as unnecessary. The fact, however, that the true vaccine disease can be produced in one who has previously had it, is strongly in favor of the course. Extensive experiments have been made as to the effects of revaccination, in Germany, where vaccination has been enforced to an extent which is not practicable in freer governments. At the time when the revaccination, published by Dr. Heim, was practiced, the population of Wurtemberg was 1,363,298; and it appears that during the period of five years 208,322 children were vaccinated, leaving only 271 above three years of age still unvaccinated. The total number of cases of small-pox that occurred during the same period was 1,677, of which 354 were cases of genuine small-pox, and 1,043 modified by previous vaccination, being about one case of failure in every 217 persons. The total number of persons vaccinated a second time, after the lapse of a certain number of years, was 44,009; of this number upward of 20,000 took the disease perfectly, 9,006 imperfectly, and 15,000 not at all. It might be inferred from this, that little more than one-third of those vaccinated in infancy could be regarded as protected from small-pox; but although probable, it is not proved, that a susceptibility for cow-pox is the same thing as a susceptibility for small-pox; for, if this be admitted, it would seem to follow that the proportion of persons liable to a second attack of small-pox must be greater than is commonly believed. Thus it appears that of 297 persons who had previously had small-pox and were pitted, 95 received the cow-pox in a perfect form, and 76 in a modified form, while 126 resisted it altogether.

I am firmly of the opinion, notwithstanding the diversity of sentiment upon the subject, that if revaccination is practiced every seven or ten years, the number of cases of small-pox would be largely diminished, and those that did occur would be of so mild a character as to require but little attention; but to wholly exterminate the disease, in my opinion, is impossible—for, as it appears in this report, in tables that are authentic, small-pox itself does not render the person absolutely impervious to the disease.

Small-pox, like all contagious exanthemata, has its periods of dormancy and activity. Every now and then, at irregular intervals, it overspreads a district of country as an epidemic, almost as frequently since as before the era of vaccination. When epidemic, it was exceedingly fatal, although different epidemics have varied much in that respect.

A glance at the tables I have furnished will show how very irregular the number of deaths have been, both before and after inoculation, as well as vaccination, in all sections of the world.

Deaths from Small-pox in New York, Philadelphia, Boston and Baltimore, from 1807 *to* 1864.

YEAR.	New York.	Philadelphia.	Boston.	Baltimore.	YEAR.	New York.	Philadelphia.	Boston.	Baltimore.
1807	29	32	....	....	1836	173	86	6	1
1808	62	145	....	....	1837	164	79	13	52
1809	66	101	....	....	1838	91	42	3	71
1810	4	33	....	....	1839	98	5	60	2
1811	117	117	....	....	1840	232	63	115	9
1812	21	1	....	....	1841	200	259	57	1
1813	2	1	....	....	1842	181	156	42	1
1814	2	1	....	....	1843	117	36	55	....
1815	94	1	....	....	1844	21	17	1	....
1816	179	97	....	....	1845	425	190	31	110
1817	14	52	....	....	1846	141	251	92	115
1818	19	8	....	....	1847	53	9	23	1
1819	1	1	....	....	1848	544	100	21	4
1820	1	1	....	....	1849	326	152	21	19
1821	1	1	....	....	1850	231	40	192	153
1822	1	1	....	....	1851	562	216	....	104
1823	18	160	....	....	1852	497	427	....	66
1824	394	325	....	....	1853	656	57	....	9
1825	40	6	....	....	1854	611	40	....	26
1826	58	3	....	....	1855	101	275	....	50
1827	149	100	3	....	1856	388	390	....	8
1828	93	107	2	....	1857	423	65	....	91
1829	16	81	1	....	1858	492	7	3	310
1830	176	86	1	....	1859	60	2	156	....
1831	224	14	4	....	1860	274	57	16	....
1832	89	37	2	....	1861	599	758	7	....
1833	25	156	1	....	1862	268	264	13	....
1834	233	195	4	....	1863	73	171	11	....
1835	351	101	7	....	1864	382	...	....	....

SMALL-POX IN NEW YORK.

Ages, Sex and Monthly Statements for the last Eleven Years.

	1854	1855	1856	1857	1858	1859	1860	1861	1862	1863	1864
Totals	611	101	388	423	492	60	284	599	268	73	382
Men	73	14	41	47	49	7	33	82	41	10	231
Women	26	7	19	24	31	4	23	48	20	5	151
Adults	99	21	60	71	80	11	56	130	61	15	114
Children	512	80	328	352	412	49	228	469	207	58	268
Children under 5 years	415	70	278	303	345	37	189	361	174	41	210
Children under 1 year	179	28	124	137	151	12	80	148	76	17	71
January	158	3	20	66	73	2	19	43	58	5	3
February	155	10	26	60	76	3	19	42	40	9	9
March	99	12	27	42	79	1	26	52	28	5	20
April	74	10	45	42	52	1	29	57	44	7	23
May	55	12	50	49	73	1	29	68	23	6	30
June	23	10	38	34	53	6	18	78	15	13	27
July	14	14	23	15	22	2	21	73	4	6	27
August	16	5	28	11	23	2	32	42	10	7	26
September	7	2	28	4	11	11	22	36	8	4	20
October	4	6	24	11	12	6	25	27	10	4	31
November	6	4	27	31	10	12	18	40	3	3	62
December	3	13	52	67	8	13	26	41	5	4	104

AGES.

	1854	1855	1856	1857	1858	1859	1860	1861	1862	1863	1864
Under 1 year	179	28	124	137	151	12	80	148	76	17	71
do 1 to 2 years	106	21	63	74	89	14	44	92	41	8	59
do 2 to 5 years	130	21	91	92	105	11	65	141	57	16	80
do 5 to 10 years	68	8	39	26	42	10	25	60	24	12	31
do 10 to 15 years	9	1	7	11	10	....	6	9	4	3	9
do 15 to 20 years	16	2	4	12	14	2	7	19	5	2	18
do 20 to 25 years	38	5	14	23	25	2	17	40	15	4	32
do 25 to 30 years	19	6	19	10	16	2	10	27	8	4	21
do 30 to 40 years	26	4	19	19	28	5	20	36	21	5	36
do 40 to 50 years	14	4	6	11	8	1	6	13	14	....	11
do 50 to 60 years	3	1	1	6	3	....	2	2	3	....	6
do 60 to 70 years	2	....	1	1	1	1	1	1	1	1	3
do 70 to 80 years	....	....	....	....	....	....	....	....	1	....	....
do 80 to 90 years	....	....	....	....	....	....	....	....	....	....	....
do 90 to 100 years	....	....	....	....	....	....	....	....	....	....	....
100 and upwards	....	....	....	....	....	....	....	....	....	....	....
Unknown	2	....	....	1	....	...	1	1	1	1	5

POPULATION, BIRTHS AND DEATHS

In Sweden (Finland excepted) during half a century before and half a century after the establishment of Vaccination, extracted from the original reports of the clergy to the Royal General Registry Office.

YEAR.	Population at the end of the year.	Born alive during the year.	Mortality during the Year.	
			Total.	From small pox
1749	.....	59,483	49,516	4,453
1750	.....	64,511	47,622	6,180
1751	1,785,727	69,291	46,902	5,544
1752	.....	64,973	49,467	10,302
1753	.....	66,007	43,905	8,080
1754	1,837,314	68,795	48,615	6,862
1755	.....	70,008	51,090	4,705
1756	.....	67,987	52,062	7,858
1757	1,870,272	61,675	55,829	10,241
1758	.....	63,262	60,527	7,104
1759	.....	63,865	49,162	3,910
1760	1,893,218	68,384	46,721	3,568
1761	.....	67,224	49,145	5,731
1762	.....	68,268	59,994	9,589
1763	1,940,017	68,231	61,180	11,662
1764	.....	67,988	53,364	4,562
1765	.....	65,872	54,566	4,697
1766	1,981,600	67,061	49,726	4,092
1767	.....	70,744	54,272	4,189
1768	.....	67,719	54,751	10,650
1769	2,015,127	66,954	54,991	10,215
1770	.....	67,172	53,071	5,215
1771	.....	65,988	56,827	4,362
1772	2,022,516	58,972	76,362	5,435
1773	.....	51,264	105,139	12,130
1774	.....	68,520	44,463	2,065
1775	2,020,847	71,642	49,949	1,275
1776	.....	66,869	45,692	1,503
1777	.....	67,689	51,096	1,943
1778	.....	71,901	55,018	6,607
1779	.....	76,387	59,325	15,102
1780	2,118,281	75,122	45,731	3,574
1781	.....	71,130	54,333	1,485
1782	.....	68,488	58,274	2,482
1783	.....	64,969	60,213	3,915
1784	.....	67,605	63,795	12,453

POPULATION, BIRTHS AND DEATHS—Continued.

YEAR.	Population at the end of the year.	Born alive during the year.	Mortality during the Year.	
			Total.	From small pox
1785	2,149,773	67,497	60,770	5,077
1786	.....	70,935	55,955	671
1787	.....	68,329	51,981	1,771
1788	.....	74,019	57,320	5,462
1789	.....	70,127	69,583	6,764
1790	2,138,232	66,710	63,589	5,893
1791	.....	71,613	55,946	3,161
1792	.....	81,063	52,958	1,939
1793	.....	77,033	54,376	2,103
1794	.....	76,429	53,377	3,964
1795	2,281,137	72,947	63,619	6,740
1796	.....	79,446	56,474	4,505
1797	.....	80,374	55,036	1,733
1798	.....	78,593	53,862	1,357
1799	.....	75,273	59,192	3,756
1800	2,347,303	67,555	73,928	12,032
1801	.....	79,629	61,317	6,057
1802	.....	74,954	56,035	1,533
1803	.....	76,644	56,577	1,464
1804	.....	76,443	59,584	1,460
1805	2,427,408	76,552	56,563	1,090
1806	.....	74,581	65,728	1,482
1807	.....	75,842	82,318	2,129
1808	.....	73,963	82,311	1,814
1809	.....	64,300	93,532	2,404
1810	2,377,851	78,916	75,607	824
1811	.....	84,862	69,246	698
1812	.....	81,079	73,095	404
1813	.....	72,021	66,266	547
1814	.....	75,837	60,959	308
1815	2,465,066	85,230	57,829	472
1816	.....	87,644	56,225	690
1817	.....	83,821	60,863	242
1818	.....	85,714	61,745	305
1819	.....	84,250	69,884	161
1820	2,584,090	84,841	62,959	143
1821	.....	92,072	68,816	37
1822	.....	94,309	59,390	11
1823	2,687,457	98,259	56,067	39
1824	.....	93,577	56,265	618
1825	2,771,252	100,315	56,465	1,243
1826	2,805,350	97,125	63,027	625
1827	2,828,568	88,138	64,920	600
1828	2,848,062	95,354	75,860	257
1829	2,864,837	99,488	82,719	53
1830	2,888,082	94,626	69,251	104
1831	2,901,061	88,253	75,274	612
1832	2,922,845	89,862	68,078	622
1833	2,959,257	100,309	63,947	1,145
1834	2,983,144	100,231	78,294	1,049
1835	3,025,439	98,144	55,738	445
1836	3,061,533	96,857	60,763	138
1837	3,080,538	94,616	75,611	361
1838	3,096,794	90,565	74,309	1,805
1839	3,115,169	91,363	72,988	1,934
1840	3,138,887	98,160	63,555	650
1841	3,173,349	95,734	61,379	237
1842	3,207,141	100,976	67,177	58
1843	3,237,188	99,151	69,115	9
1844	3,275,864	304,693	66,009	6
1845	3,316,536	103,690	62,674	6
1846	3,343,556	99,703	72,683	2
1847	3,363,330	99,179	79,405	13
1848	3,999,341	102,524	66,513	71
1849	3,443,803	112,304	67,842	341
1850	3,482,541	110,399	68,514	1,376

POPULATION, BIRTHS AND DEATHS—Continued.

YEAR.	Population at the end of the year.	Born alive during the year.	Mortality during the Year.	
			Total.	From small pox
1851	3,516,889	111,065	72,506	2,488
1852	3,541,399	108,305	80,090	1,534
1853	3,562,462	111,407	84,047	279
1854	3,606,987	120,107	70,816	204
1855	3,639,332	115,072	77,734	41
1856	3,669,464	116,280	78,600	39
1857	3,700,210	117,310	80,121	27
1858	3,730,181	120,600	81,291	13
1859	3,761,819	119,677	82,610	6
1860	3,782,109	118,111	83,912	1,831

Small-pox Death-Rates for the Kingdom of Sweden for the One Hundred and Seven Years, 1749–1855—Calculated by Mr. Hale, from facts officially communicated.

YEAR.	Small-pox deaths per million of living popula-tion	Year.	Small-pox deaths per million of living popula-tion.	Year.	Small-pox deaths per million of living popula-tion.	Year.	Small-pox deaths per million of living popula-tion.	Year.	Small-pox deaths per million of living popula-tion.
1749	2,513	1768	5,334	1787	823	1806	613	1825	449
1750	3,494	1769	5,059	1788	2,534	1807	884	1826	223
1751	2,106	1770	2,581	1789	3,137	1808	757	1827	212
1752	5,714	1771	2,152	1790	2,734	1809	1,007	1828	90
1753	4,395	1772	2,674	1791	1,421	1810	347	1829	19
1754	3,735	1773	5,979	1792	878	1811	291	1830	36
1755	2,516	1774	1,050	1793	942	1812	167	1831	211
1756	4,226	1775	631	1794	1,757	1813	225	1832	213
1757	5,475	1776	737	1795	2,955	1814	126	1833	387
1758	2,783	1777	943	1796	1,903	1815	191	1834	352
1759	2,074	1778	3,178	1797	751	1816	277	1835	147
1760	1,885	1779	7,195	1798	585	1817	96	1836	45
1761	3,902	1780	1,593	1799	1,609	1818	120	1837	117
1762	4,879	1781	699	1800	5,126	1819	63	1838	583
1763	6,011	1782	1,165	1801	2,563	1820	55	1839	621
1764	2,335	1783	1,893	1802	614	1821	14	1840	2.7
1765	2,387	1784	5,810	1803	611	1822	4	1841	75
1766	2,005	1785	2,361	1804	605	1823	15	1842	18
1767	2,102	1786	311	1805	449	1824	226	1843	3
	2		2						
	2		2						
	0.5		0.5						
	3								
	21		21						
	39		39						
	395		395						
	707		707						
	433		433						
	78		78						
	57		57						
	11		11						
	7								
	4		4						
	1		1						
	0.5		0.5						
	510								
	....		....						
	....		....						

Statistics of Vaccination and Small-pox, in the Grand Duchy of Baden, from 1810 to the present time.

YEAR.	Population.	Number of Vaccinations	Cases of Small pox.	Deaths by Small-pox.
1810	973,698	19,453	981	113
1811	990,663	20,338	663	34
1812	999,829	27,888	284	21
1813	.....	17,564	199	8
1814	980,661	18,060	386	75
1815	993,418	32,065	3,031	149
1816	995,919	30,675	1,597	127
1817	922,138	23,083	371	30
1818	1,013,467	18,913	122	22
1819	1,032,276	25,253	122	22
1820	1,032,276	26,630	5	0
1821	1,072,554	30,488	7	0
1822	1,070,927	31,848	0	0
1823	1,109,437	28,142	0	0
1824	1,119,993	32,918	0	0
1825	1,132,967	31,052	0	0
1826	1,145,952	33,462	0	0
1827	1,163,682	33,462	0	0
1828	1,176,075	35,515	170	28
1829	1,188,340	35,386	202	32
1830	1,200,471	32,733	115	23
1831	.....	33,569	54	0
1832	.....	33,849	0	0
1833	1,220,037	32,094	185	22
1834	1,230,791	36,085	107	25
1835	.....	33,697	198	26
1836	1,244,171	34,111	153	17
1837	1,263,966	36,100	130	9
1838	.....	36,921	32	7
1839	1,141,197	36,598	77	9
1840	1,296,464	37,535	6	2
1841				
1842	1,312,457	76,344	146	1
1843	1,334,835	39,437	79	7
1844	.....	37,257	235	26
1845	1,349,884	40,242	179	18
1846	1,367,456	37,524	6	2
1847	.....	36,035	114	6
1848	.....	25,668	154	44
1849	1,362,774	36,796	418	70
1850	.....	19,911	2,569	251
1851	.....	37,661	552	54
1852	1,356,943	36,448	49	3
1853	.....	32,272	1	0
1854	.....	32,670	64	16

EXTRACT FROM A STATEMENT BY DR. SIEGEL ON THE REVACCINATION OF THE BADEN ARMY.

Revaccination was introduced by order of the 7th April, 1840, and has since been effected with the greatest punctuality and exactness; an exception being made for the years 1848, 1849, and 1850, when in consequence of the political events which took place in the Grand Duchy, the process in question lapsed.

The order in question says, "The whole army, below the grades of sergeant-major and cavalry sergeant, with the following exceptions:

"*a* Individuals above thirty-six years of age.

"*b* Individuals who show by medical certificate that they were successfully vaccinated after coming to the age of twenty; or that, in case of the first revaccination having had no result, they had been operated on again, according to the proper system."

All the army, with these exceptions, is subject to revaccination, and no account is to be taken, by way of exemption, either of the presence of natural pock-marks, or of cow-pox, or of inoculation certificates, or proof of previous small-pox.

The revaccination is carried out as follows: A soldier who enters the Grand Ducal Army, as conscript or volunteer, is, if he has passed his eighteenth year, revaccinated soon after his enlistment, and if the first operation has no result, a second is performed after the lapse of a year.

The elder men are revaccinated in the first year of their enlistment.

The innoculation is effected partly with primitive, partly with revaccination lymph, and it should be observed that the latter is in its results as favorable, and, in some instances, more favorable, than the former.

The number of men attacked in twelve years by variola and varioloid before the introduction of revaccination was 169, whilst the corresponding number, after the introduction of revaccination, for a like period was 52 only; of whom only 12 had been operated on with success, the remainder having been revaccinated without result, or else not at all.

The results evidently argue strongly in favor of revaccination, seeing that the cases taken in the period previous to the use of that remedy are to those of the subsequent period as 3.2 to 1.

I cannot, however, omit the observation, that this proportion, so favorable to revaccination, cannot be entirely ascribed to its adoption, but partly to the circumstance that from 1828 to 1839 variola and varioloid broke out in certain districts of the Grand Duchy oftener than in the period shown by the Table No. 1, which cannot fail to have been without influence on the larger number of cases in the army previous to the adoption of revaccination.

Revaccination and Small-pox in the Army of Baden during Twelve of the Years 1840–55.

Year	Number revaccinated.	Signs of previous Protection.				Revaccinated.				Result.						Cases of Varioloid and Varicella in the Army.		
		Marks of previous operation.		Marks of small-pox.	None.	With lymph of primary vaccination.		With lymph of revaccination.		Perfect.		Spurious.		None.		In men whose revaccination had had a result.	In men whose revaccination had had no result.	In men not revaccinated.
		Distinct.	Indistinct.			For the first time.	For the second time.	For the first time.	For the second time.	With lymph of primary vaccination.	With lymph of revaccination.	With lymph of primary vaccination	With lymph of revaccination.	With lymph of primary vaccination.	With lymph of revaccination.			
1840	3,170	3,015	118	15	22	1,276	12	1,881	51	311	521	397	821	577	510	.....	.....	5 cases of varioloid.
1841	3,573	3,153	300	108	12	599	6	2,660	308	243	900	139	766	223	1,302	.....	.....	9 cases of varioloid.
1842	3,616	3,417	175	5	19	483	39	2,476	618	183	912	122	802	217	1,380	.....	.....	2 cases of varioloid.
1843	3,400	3,219	111	11	29	637	57	1,953	748	378	1,999	100	573	156	931	.....	1 case of varioloid.	1 case of varioloid.
1844	3,891	3,772	78	6	35	618	570	2,193	730	335	829	284	803	351	1,292	.....	1 case of varioloid.	7 cases of varioloid.
1845	3,928	3,760	125	11	29	776	2,006	230	916	342	1,025	150	625	528	1,258	9 cases of varioloid.* 2 cases of varioloid.	13 cases of varioloid.	....
1846	3,741	3,647	54	9	31	502	227	2,310	672	300	1,167	151	476	278	1,369	.....	.....	1 case of varioloid.
1847	3,491	3,412	50	2	27	728	156	1,917	660	350	1,039	162	491	382	1,067	.....	.....	.....
1851	5,574	5,167	353	17	37	1,318	563	2,757	906	600	1,121	451	739	860	1,800	1 case of varioloid	.....	.....†
1853	3,672	3,311	278	9	41	895	337	1,486	951	447	737	299	448	518	1,223	.....	.....	.....‡
1854	3,666	3,503	131	9	20	989	321	1,782	571	457	991	255	462	627	981	.....	.....	.....
1855	4,591	4,312	211	47	18	1,343	203	2,117	898	643	1,142	253	529	645	1,374	.....	.....	.....
	46,313	43,751	1,990	252	320	10,221	4,250	23,777	8,962	4,577	11,409	2,820	7,335	5,382	14,520	12	15	25

* Query—Whether this has not been a clerical error for varicella or chicken pox? See title "Varioloid and Varicella."—J. S.

† Political circumstances occasioned the revaccination of the army to be interrupted during the three years, 1848-50.

‡ The Revaccination Statistics of 1852 are too incomplete for use in the table.

Small-pox in Copenhagen, from 1749 *to* 1860.

Year.	Population	Mortality.	Excess of deaths over births.	Excess of births over deaths.	Died of small-pox.	Remarks.
1750	60,000	4,317	1,571	....	1,457	The population is by calculation.
1751	.....	2,798	17	.....	80	
1752	.....	2,594	2	.....	113	
1753	.....	2,845	300	.....	53	150 carried off by the measles this year.
1754	.....	2,542	.....	221	9	Inoculation first introduced in Denmark. (Countess Bernstoff, by Dr. Argent, London)
1755	.....	3,821	1,152	.....	1,117	Two inoculation hosp ls erected, each for six persons.
1756	.....	2,792	139	.....	125	
1757	.....	3,700	1,100	.....	13	Measles and dysentery prevailed this year.
1758	.....	4,761	2,354	.....	13	Likewise very fatal; 420 carried off by the measles.
1759	.....	4,355	2,296	.....	1,079	Scarlet fever showed itself epidemically for the first time, and carried off 1,000.
1760	.....	3,228	746	.....	118	Christian VII., then crown-prince, inoculated. The inoculation hospitals closed for want of applicants.
1761	.....	2,593	123	.....	4	
1762	.....	4,512	2,223	.....	7	Measles and typhoid fevers prevailed.
1763	.....	5,034	2,707	.....	167	
1764	.....	3,675	1,028	.....	480	
1765	.....	2,973	432	.....	138	
1766	.....	3,923	1,286	.....	42	Dysentery prevailed.
1767	.....	3,361	404	....	6	
1768	.....	2,912	....	49	27	
1769	70,495	4,434	1,525	.....	1,229	First census taken.
1770	.....	3,770	860	.....	23	An inoculation establishment erected outside the city for 48 persons: 16 payers and 32 poor.
1771	.....	3,144	487	.....	8	
1772	.....	4,209	1,605	.....	22	Measles prevailed severely.
1773	.....	3,229	435	.....	190	
1774	.....	2,273	.....	647	116	
1775	.....	3,220	311	.....	276	
1776	.....	2,825	56	.....	86	
1777	.....	2,894	....	202	7	Scarlet fever very virulent.
1778	.....	2,884	.....	44	278	
1778	.....	3,159	138	.....	283	
1780	.....	2,673	.....	362	98	
1781	.....	3,741	756	.....	174	148 died of the measles, which prevailed this year.
1782	.....	4,122	1,422	.....	332	
1783	.....	2,917	.....	118	123	The inoculation establishment outside the town closed, and its property transferred to the lying-in-hospital.
1784	.....	3,004	....	220	77	
1785	.....	3,762	171	.....	427	
1786	.....	4,001	867	.....	193	Typhus, small-pox epidemic at Elsinore. (See De Meza's Acta Med. Hav. vol. iii.)
1787	.....	3,484	419	.....	136	Scarlet fever prevailed.
1788	.....	3,733	675	.....	185	
1789	.....	3,849	670	.....	323	
1790	.....	2,313	.....	1,179	140	
1791	.....	3,649	290	.....	297	Measles.
1792	.....	2,645	....	878	155	
1793	70,495	2,433	.....	851	139	
1794	.....	3,123	.....	146	452	
1795	.....	3,524	475	.....	248	Scarlet fever.
1796	83,604	3,045	18	.....	357	
1797	.....	3,278	2	.....	423	
1798	.....	3,717	366	.....	386	
1799	.....	3,601	194	.....	54	
1800	.....	3,689	308	.....	35	Scarlet fever.

Deaths from Small-pox in Copenhagen—Continued.

Year.	Population	Mortality.	Excess of deaths over births.	Excess of births over deaths.	Died of small-pox.	Remarks.
1801	91,631	4,542	.....	1,357	486	Vaccination first introduced. A royal commission of vaccination appointed.
1802	.....	3,262	.....	353	73	Vaccination establishment erected at Copenhagen.
1803	.....	3,442	.....	237	5	The commission of vaccination
1804	.....	3,388	145	.....	13	recognize the protective powers of vaccination.
1805	.....	3,585	.....	265	5	
1806	.....	3,529	.....	361	5	
1807	.....	4,307	597	.....	2	Bombardment of Copenhagen
1808	.....	4,606	1,120	.....	46	by the English.
1809	.....	3,872	647	.....	5	
1810	.....	2,975	.....	810	4	Decree ordering vaccination
1811	100,975	3,604	154	.....	0	was promulgated this year.
1812	.....	3,410	101	.....	0	
1813	.....	3,764	493	.....	0	
1814	.....	3,711	458	.....	0	
1815	.....	3,409	216	.....	0	
1816	.....	2,956	.....	169	0	
1817	.....	2,907	.....	152	0	
1818	.....	2,554	.....	398	0	
1819	.....	2,319	.....	862	9	
1820	.....	2,576	.....	501	0	
1821	.....	3,459	.....	94	0	
1822	.....	3,345	.....	842	0	
1823	.....	2,852	.....	542	0	
1824	.....	3,212	.....	515	41	
1825	.....	3,280	.....	260	12	The vaccination commission
1826	.....	3,588	.....	9	29	abolished, and vaccination
1827	.....	3,410	30	.....	4	placed under the control of
1828	.....	3,547	.....	487	1	the board of health.
1829	.....	3,890	431	.....	29	Small-pox epidemic.
1830	.....	3,794	449	.....	3	
1831	.....	3,678	86	.....	0	
1832	.....	3,389	.....	18	3	
1833	.....	3,741	.....	145	19	Revaccination becomes general
1834	119,292	3,293	.....	335	26	in May month. Quarantine
1835	.....	3,862	6	.....	434	for small-pox abolished.
1836	119,591	2,848	.....	789	81	Revaccination ordered for the
1837	.....	3,359	.....	234	1	army.
1838	.....	3,462	.....	97	2	
1839	.....	3,108	.....	513	0	
1840	.....	3,054	.....	487	2	
1841	.....	3,327	.....	119	0	
1842	.....	3,404	.....	207	35	
1843	.....	3,498	.....	263	111	
1844	.....	3,622	.....	373	83	Revaccination ordered for the
1845	126,787	3,515	.....	625	7	navy.
1846	.....	4,126	92	.....	0	
1847	.....	3,642	.....	468	0	
1848	.....	3,521	.....	941	2	
1849	.....	4,044	.....	213	7	
1850	129,695	3,563	.....	1,083	0	
1851	.....	3,490	.....	1,211	0	
1852	.....	2,656	.....	1,161	193	
1853	.....	3,741	.....	1,022	182	
1854	.....	4,962	.....	900	211	
1855	131,891	4,110	.....	241	56	
1856	.....	4,201	.....	460	41	
1857	.....	4,602	.....	780	29	
1858	.....	4,901	.....	640	11	
1859	.....	5,005	.....	500	6	

ARTICLE XIV.

Small-pox in New York city, with some statistics and remarks on Vaccination, by Wm. H. Richardson, M. D., of Westport, N. Y., being a report of the Committee on Public Health, of the New York Legislature, submitted Feb. 10, 1865.

The committee on public health and medical colleges and societies, to which was referred the resolution in relation to small-pox in the city of New York, report:

That immediately after the reception of the resolution, they addressed letters to the Hon. C. Godfrey Gunther, Mayor of New York: and also F. I. A. Boole, Esq., City Inspector; Dr. Lewis A. Sayre, resident physician; the Board of Commissioners of Charities and Corrections; the Board of Commissioners of Emigration, and to Drs. Willard Parker and James R. Wood, asking for any information in their possession, and for such practical suggestions as they saw fit to make.

The mayor and the city inspector immediately responded by letter, communicating important information, and Drs. Sayre, Parker and Wood appeared personally before the committee and furnished an array of facts that convinced your committee that stringent legislation was necessary to prevent the spread of that loathsome and dangerous disease, not only over the city of New York, but also over the whole State and country; facts which showed conclusively that small-pox constantly exists at many points in the commercial metropolis of this country, and that the law gives no adequate power to prevent its spreading over our land.

It appears, by the most undoubted evidence, that a degree of criminal carelessness in regard to the spread of that disease in the city of New York prevails to an extent that is perfectly appalling; that the disease exists in crowded tenement houses in which are domiciled hundreds of people, without any attempt being made, in most cases, to isolate or quarantine it; and that in many of these places are a large number of unvaccinated persons. It also appears that persons taken sick with this disease are allowed to travel in the cars of the city railroads, and in the stages which are constantly running in the principal thoroughfares of the city; and that strangers taken sick with the disease at the hotels or boarding houses are removed to the Small-pox Hospital in covered carriages, which perhaps the next hour are occupied by the wives and families of citizens; or,

possibly, by unsuspecting gentlemen from the country, desirous of exploring the Central Park, or visiting the High Bridge, or of taking a drive on the Bloomingdale Road or the avenues; and that at some of the hotels strangers are put into the same room and bed that was occupied the night before by persons sick with small-pox. Is it strange, in view of these facts, that this loathsome and unwelcome disease finds its way into the families of the wealthy, and that the man who in pursuit of business or pleasure visits the great city, returns to his peaceful home, perhaps hundreds of miles distant, to sow there the seeds of disease and death? It is said, with how much truth your committee cannot say, that there has been no case of small-pox in the States of Connecticut, Rhode Island or Massachusetts, for several years, except a few cases that have been brought into Boston on foreign vessels which cannot be traced directly to New York.

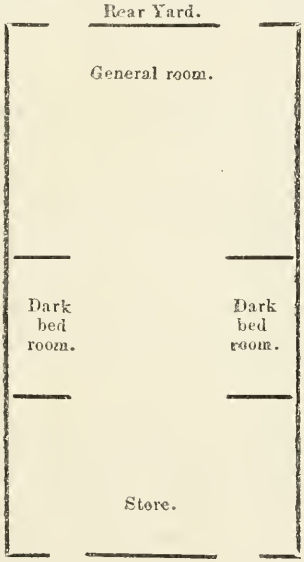
Dr. Smith presented to your committee a report of a committee of medical gentlemen who districted the city, and by their own personal efforts discovered six hundred and forty-four cases of small-pox actually existing in the city at one time. These investigations were made in two days, and in response to the request of your committee for information. Such praiseworthy and disinterested efforts are worthy of the highest commendation, and cannot be too highly appreciated. Among other interesting facts that were communicated to your committee, it was said that in a building adjoining the largest wholesale dry-goods store on the American Continent the small-pox has existed and propagated itself for the last nine months.

This den is situated in the busiest part of the city, in the immediate vicinity of West Broadway and Chambers street, and within a stone's throw of the largest passenger railroad depot in the city. Another very common mode by which the disease is propagated and spread broadcast over the land and in our armies, is by the ready-made clothing trade. It is no uncommon thing for the physician, who is called to see a patient with small-pox, to find the child covered with an unfinished garment that the mother has taken home from the shop to make. Is it, then, a matter of surprise that our soldiers as well as citizens throughout the country, without any known exposure, are so often attacked by this terrible disease?

As the laws now exist, there is no authority by which any officer can remove a person sick with small-pox, or by which vaccination can be compelled; and your committee think that some law giving proper authorities power to compel vaccination, and to quarantine or isolate, or remove each case of small-pox, according to the circumstances by which it is surrounded, is immediately and imperatively demanded.

Dr. Jones, city physician of Brooklyn, informed your committee that he had caused to be vaccinated within the past six months no less than forty thousand persons, and that by earnest and persevering effort he had been able to greatly diminish the amount of small-pox in that city.

As illustrating the carelessness prevailing in regard to the spreading of small-pox he says: "We have in this city a number of small retail stores, many of the owners thereof, with their families, large or small, as the case may be, occupy rooms and live on the same floor where the store is kept. In some instances I have found a store in front, a sleeping room or apartment made by a board partition reaching only half way to the ceiling, and to the rear of this a place which answers for kitchen, dining, sitting and general living room. The diagram will illustrate.



"In the beds I have found in some instances as many as three cases of small-pox, in one instance I found three in one bed sick with small-pox, and in the general room one dead of the same disease, several neighbors sitting therein, and the family dining in the store.

"In passing from the general room to the store you came in direct contact with the sick, the wooden partitions reaching only half way to the ceiling, one atmosphere was common to all places on that floor; in such a place as this customers were received in a poisoned atmosphere, waited upon by persons direct from the bedside of the sick or dead, and supplied with goods capable of infecting hundreds.

"I have even found children sick with this disease lying under the

counter over which the mother was waiting upon and selling goods to a customer.

"These citations will serve as types of hundreds of others met with during the last few months, in all such cases I caused the stores to be closed and adopted other effectual, judicious methods to protect the public. In many places visited I found large amounts of clothing principally from New York, such as coats, pants and vests, in numbers say from one to six dozen in each place, in the hands of workmen to make up for the large clothing establishments of New York and elsewhere; I have seen children thickly covered with small-pox pustules lying on the shop board with a lot of such goods serving them as pillows. I have found them in cribs, on cradles or beds temporized on chairs, covered with these goods, as with quilts. I have found in a number of instances small-pox matter in many places deposited on these goods.

"Such goods to the value of thousands of dollars I have invariably seized and burned.

"When I have found such goods in a house, but not in the same room, I have notified the owners thereof, that I had seized them in order to protect the public, and if they could disinfect them to my satisfaction the goods would not be destroyed.

"I have known coachmen, car conductors and drivers, washerwomen and house cleaners to go direct from the sick to their several daily vocations, washerwomen to bring soiled clothes and wash and iron them in the same room with the sick, to take clothes from the bodies and beds of *the* sick into their homes in large tenement houses to, as they term it "do up."

"I have known milliners and mantuamakers to receive their customers in a room adjoining which would lay a case of small-pox; in all such and many other cases that might be cited, proper measures have been adopted to protect the community.

In regard to the necessity for further legislation, he says: "Can anything more be done for Brooklyn in relation to this small-pox question? I answer emphatically, yes, not only for Brooklyn but for the entire State. Give us a law making it compulsory for every one born in the State, or resident thereof, to be vaccinated *and re-vaccinated*. Economy, justice and humanity demand it, and I pray that the wisdom of the present Legislature may be so directed that they fail not to give the people this great boon."

It should be premised that Brooklyn enjoys a law giving extraordinary powers to its health authorities, and Dr. Jones was empowered to vaccinate or to remove, or to isolate or quarantine, each case according to his judgment.

The results are very encouraging, and but for its proximity to and constant intercourse with New York, Brooklyn would now doubtless be entirely exempt from small-pox.

To the subject of vaccination your committee feel that they cannot attach too much importance; for in that way only can small-pox be exterminated; and in their opinion, based upon the highest medical authority, your committee have no hesitation in saying that, with strong laws making vaccination compulsory, thoroughly enforced, this formidable scourge may be virtually exterminated from our land.

In order that so desirable a result may be obtained, it will be necessary first, that good virus should be used.

Secondly, that it should be used as often as every fifth year till the period of adolescence. After that time the necessity of repeating the operation gradually becomes less as the subject advances in years; so that a person who has been re-vaccinated every five years from the age of four or six weeks to twenty years, and every seven to ten years thereafter till the age of forty-five, would incur but little liability to contract small-pox or varioloid after the last-mentioned age. One important reason why so many persons have varioloid, is owing to the use of bad virus; or perhaps, in many cases, to the use of virus that is too far removed from the cow; or, in other words, has passed through too many human systems. It is held by many prominent medical men that in many cases an insufficient quantity is used, and it is recommended by them that the operation be performed in three or four places at the same time.

Dr. Lewis A. Sayre, resident physician of the city of New York, from whose valuable little pamphlet we take the liberty of quoting largely, has compiled some interesting tables which clearly show the great value of vaccination. The following is a table of statistics on this subject from several European countries:

MORTALITY STATISTICS OF SMALL-POX.

Approximate average annual death-rate by Small-Pox per million of living population.

Countries in which records have been taken.	Terms of years respecting which particulars are given.	Annual death per million by small-pox *before* introduction of vaccination.		Terms of years respecting which particulars are given.	Annual death per million by small-pox *after* introduction of vaccination.
Austria, Lower	1777—1806	2,484	and from	1807—1850	340
do Upper and Salzburg	1777—1806	1,421	do	1807—1850	501
Styria	1777—1806	1,052	do	1807—1850	446
Illyria	1777—1806	518	do	1807—1850	244
Trieste	1777—1806	14,046	do	1807—1850	182
Tyrol and Voralberge	1777—1803	911	do	1807—1856	170
Bohemia	1777—1806	2,174	do	1807—1850	215
Moravia	1777—1806	5,402	do	1806—1850	255
Silesia (Austria)	1777—1806	5,812	do	1807—1850	198
Gallicia	1777—1806	1,194	do	1807—1850	676
Bukswina	1777—1806	3,527	do	1807—1850	516
Prussia, East Province	1776—1780	3,321	do	1810—1850	556
do West Province	1776—1780	2,272	do	1810—1850	356
Posen	—1780	1,911	do	1816—1850	743
Brandenburg	1776—1780	2,181	do	1810—1850	181
Westphalia	1776—1780	2,643	do	1816—1850	114
Rhenish Provinces	1776—1780	908	do	1816—1850	90
Berlin	1781—1805	3,422	do	1810—1850	876
Saxony (Prussia)	1776—1780	710	do	1816—1850	170
Pomerania	—1780	1,774	do	1810—1850	130
Sweden	1774—1801	2,050	do	1810—1850	158
Copenhagen	1751—1800	3,128	do	1801—1850	286
		62,861			7,403
		7,403			
Lives saved		55,458			

"We thus find that out of twenty-two millions of people there died annually from small-pox, previous to vaccination, 62,861; and from the same number of people, there have died annually, since vaccination was adopted, only 7,403, thus saving annually the lives of 55,458 persons, besides the relief from physical suffering, which those who are afflicted with this terrible scourge must necessarily endure.

"From all the evidence we have been able to obtain, we have reason to believe, in fact, we are almost positively certain, that had the vaccination been perfect and universal among these twenty-two millions, the other 7,403 could have been saved also. In proof of this view of the case, I append the following statistics, which have been furnished me by Dr. Whittelsey, the resident physician of Randall's Island.

"It will be observed that in the nursery hospital, during the years of 1854, '5 and '6, there were admitted 3,566 children, and yet no case of small-pox occurred during this period, except the four cases

that were brought there suffering from the disease at the time of admission, and it never spread to the other inmates in a single instance.

"During these three years the doctor attended personally to the vaccination of every child on admission, but in the subsequent five years he states that it was done by subordinates, and in many instances overlooked entirely, and the result is clearly seen in the tables below, which show that forty-four cases of small-pox had occurred out of 6,867 children admitted during these five years.

"But in the Refuge hospital, which he retained under his own personal supervision, and in which he has persistently continued the plan of vaccination on admission, he has *entirely exterminated the disease for the last seven years.* These statistics speak volumes, and prove conclusively that the disease can be exterminated by *universal* and *efficient vaccination* and re-vaccination, and I beg therefore to call your especial attention to them.

Nursery Hospital statistics of Small-pox.

Date.	Number inmates.	Number admitted.	Whole number..	Cases small-pox.	Elsewhere contracted.	Remarks.
1851	1,354	2,087	3,441	4	....	
1852	1,419	1,794	3,213	1	1	
1853	1,311	1,729	3,040	7	....	
1854	1,305	1,385	2,690	3	3	1st year of vaccination on admission.
1855	1,156	1,222	2,378	1	1	
1856	1,062	959	2,021	....	....	No cases contracted in the institution since commenced to vaccinate on arrival.
1857	879	1,276	2,155	4	....	
1858	1,407	1,169	2,576	13	8	
1859	1,320	1,148	2,468	11	3	
1860	1,142	1,397	2,539	6	3	
1861	1,153	1,877	3,030	10	5	
	13,508	16,043	29,551	60	24	36 whole number contracted in the institution.
		13,508				
		29,551				

Whole number of inmates during a period of eleven years..... 29,551
Whole number of cases of small pox during that period..... 60
Of which there were contracted and brought to the institution..... 24
Average yearly number of inmates..... 2,686
Average yearly cases of small-pox..... 5½
Contracted elsewhere..... 2½

House of Refuge statistics by Dr. Whittelsey.

Since 1855 all children, deemed unprotected, have been vaccinated on their arrival.
There were in the Refuge January 1st, 1855..... 419 children.
There have been admitted up to January 1st, 1862..... 2,021 do

Total number..... 2,440 do

During this period of seven years no cases of small-pox or varioloid has occurred in the Refuge, notwithstanding there were children admitted, during the time, suffering with the disease, necessarily exposing the inmates to contagion.

"Dr. J. G. Balfour, surgeon to the Royal Military Hospital, Chelsea, states that the small-pox mortality of the British navy has not reached a third, nor that of the British army a fourth of the London rate: and he says, "that in the experience of the Royal Military Asylum for forty-eight years (within which time 5,774 boys have been received for training) only four deaths by small-pox have occurred *and these all in unvaccinated boys*, who were believed already to have suffered small-pox before becoming inmates of the school." And the reviewer of these papers states, that "the combined weight of testimony from all sources of evidence is to show *that in proportion* as vaccination *is general and efficient, so is the exclusion of small-pox from the community, and the mortality greatly lessened.*"

"Although from the above statistics it is abundantly proved that *vaccination will prevent small-pox*, yet it is now generally admitted that its protecting influence IS NOT OF LIFE LONG DURATION; but that it diminishes in proportion to the lapse of time from the vaccination, until it has been several times repeated, or until the system has been so thoroughly infected with the vaccine poison, that it will then act as a permanent protection equally as well, as if the person had previously suffered from the small-pox itself.

Dr. G. B. Wood says: "It cannot now be denied that a single vaccination does not afford the permanent security it was supposed to do. Probably nearly one-half of those vaccinated successfully are liable to more or less effect from the variolous contagion; though it is asserted that when the operation is performed with *four or more insertions* instead of *one*, the proportion of the protection is much greater." Mr. Simon in his celebrated report says that he was much struck with the fact, "that persons who had been vaccinated ten or fifteen years ago, and who during this interval had, perhaps, repeatedly resisted small-pox, would at length, in a certain proportion of their number, yield to the infection."

"This had most frequently happened during the time when small-pox was severely epidemic among the unvaccinated, and when large masses of persons, with vaccination of many years, were exposed to the test of a strong epidemic influence.

"Under this ordeal, it became evident that, for some vaccinated persons, the insusceptibility conferred by cow-pox was not of life long duration, and from a careful analysis of cases it was shown, that this lessened security of certain vaccinated persons bore at least *some* proportion to the number of years which in each case had elapsed since vaccination, but there were not materials to prove any uniform rate of increase from year to year, and the increase, such as it was,

apparently continued up to thirty years of age, after which period it seemed that the liability to contract small-pox underwent a continuous decline.

"We therefore see the absolute necessity to perform *re*-vaccination in order to insure permanent protection.

"In proof of the practical value of re-vaccination, Mr. Simon states on the authority of Professor Heim, that in Wirtemburg, 'during the five years, 1833–37, though small-pox infection had been sixteen times imported into different regiments of the army, there had ensued among the 14,384 re-vaccinated soldiers only, in the person of one whose re-vaccination two years before had been followed by 'modified success,' a single instance of varioloid.'

"In Prussia, just as in Wirtemburg, the practice of re-vaccination grew out of the knowledge that small-pox would ultimately attack a certain proportion of those who had been vaccinated only in infancy.

"This knowledge, too, had been dearly purchased in the Prussian army; for during the ten years preceding 1831, cases of post-vaccinal small-pox were increasing in number and fatality; attacks were counted annually by many hundreds; and within the three years 1831–33, there had occurred no fewer than 312 deaths by small-pox.

"For the last twenty years the Prussian army has represented an almost entirely re-vaccinated population, and what has been the contrast? 104 annual deaths by small-pox was the last experience of the former system; two annual deaths by small-pox has been the average for the re-vaccinated army."

"From 1843 re-vaccination has been compulsory in the Bavarian army; and from that date to the present time (1857) neither a single death by small-pox, nor even a single case of unmodified small-pox, has occurred in that population."

"Many other statistics from Sweden, Denmark, Baden and the British army, could be cited equally striking as the above, proving conclusively the absolute necessity for *re-vaccination*. But as enough has been given to prove its efficacy, I will conclude my report by giving the average number of deaths that have occurred annually in the city of New York by small-pox for the last ten years, showing the absolute necessity of some action being taken to arrest its frightful progress.

"In the city of New York for the last ten years, there has been an annual average death by small-pox of more than 400 persons.

"In view of this fact, and of the statistics I have presented above, we see the immense importance of some legislative action for the better protection of our citizens from this most dreadful of all diseases."

"In this connection it will be proper to state, that the bill for the prevention of small-pox herewith presented, is substantially the same as was recommended by Dr. Sayre in 1862.

A committee of the American Medical Association, in a report on this subject say:

"According to the most reliable statistics obtainable, the annual death-rate of the United States is about one in forty-five of the whole population, or about 600,000 annually for the last ten years. Of this number of deaths from all causes, about one in every two hundred and fifty, or in round numbers, not less than 2,500 die annually of small-pox. This mortality, estimated by the usual ratio of deaths in small-pox, demonstrates the existence of more than 10,000 cases of unmodified small-pox annually in the United States, exclusive of varioloid, all of which can be wholly prevented by effectual vaccination and *re*-vaccination. During the great epidemics of small-pox which prevailed in Europe during the early part of the present century, all observers had abundant opportunities for ascertaining the true value of vaccination. The vaccinated and those who had previously had small-pox were both found to be more or less subject to the disease. Early in the progress of these epidemics, however, an important fact became evident, namely, that there was a great difference in the mortality of small-pox when it attacked these three classes: 1. The vaccinated; 2. The variolated; 3. Those who had neither been vaccinated nor had small-pox. Of the first class, those who had been previously vaccinated, out of every 330 attacked only one died. Of the second class, those who had previously had small-pox, one out of every fifty died. While of the third class, those who had neither been vaccinated nor had small-pox, one out of every four died. Thus proving the great superiority of vaccination over small-pox itself, in protecting the system from the fatality of a second attack.

"Unmodified small-pox is not only a very fatal disease, as proved by its frequently cutting off one-fourth of all whom it attacks, but its tendency is to develop any latent disease which may exist in the constitution, particularly scrofula, and it is thus, indirectly, the cause of death to a much larger portion of the human race than at first sight appears. It is not, therefore, surprising that small-pox, attacking for the second time an already enfeebled constitution, should cause a greater proportion of deaths than takes place when it occurs after vaccination, a much milder form of the same disease, and therefore proportionately less likely to develop any pre-existing constitutional affection.

"It may, indeed, be truly said, that during the last sixty-four

years, vaccination has not only prevented millions of cases of small-pox, but that it has also saved a multitude of persons from scrofula and other fatal maladies.

"The human race has become stronger, has produced more hardy off-spring; not only suffering less from disease in general, but in all respects more capable of resisting it, through the instrumentality of vaccination."

On the subject of re-vaccination, the same committee say:

"Several governments, confident in the anti-variolous power of vaccination, and profiting by the experience gained, determined upon re-vaccination as the most likely means of getting rid of the epidemics which were desolating their armies. The effect was so salutary as to have finally banished small-pox from among them. But this was not the only benefit. Knowing, as we do, that small-pox and cow-pox are in reality the same disease, the latter being merely deprived of its virulence by having previously passed through the system of the cow, the results of these numerous re-vaccinations are of immense importance not only in confirming the identity of small-pox and cow-pox, but in establishing the no less important fact, that the protective power of small-pox itself wears out of the system in a certain proportion of cases, as life advances, in nearly the same ratio as that of cow-pox. Thus, in all these armies, a certain proportion of the men were found to have been previously vaccinated, while no inconsiderable proportion had passed through unmodified small-pox. Now, if we take the susceptibility to re-vaccination as a test of liability to varioloid or to a second attack of small-pox, we have these vaccinations proving the fact that after a certain number of years the same proportion of those who have previously had small-pox become susceptible to a second attack as those who have been vaccinated are to varioloid. So that once having passed through all the dangers of unmodified small-pox, the person, at the end of twenty years, for instance, has no better security against a second attack, than the person who has been vaccinated for a corresponding length of time.

"In the Wurtemberg army, of 40,000 cases collected by Dr. Heim, on re-vaccination it was found that in every 100 vaccinated after small-pox, 32 succeeded, 26 were modified, and 42 failed. In every 100 re-vaccinated 34 succeeded, 25 were modified, and 41 failed.

"According to the Statistical Report of the Medical Department of the English Army, from October 1858 to December 1859, 32,510 soldiers and recruits were vaccinated. Of this number, 4,124 bore marks of unmodified small-pox; 23,924 bore good marks of vaccination; 1,901 bore doubtful marks of vaccination; and 2,561 had no marks of either vaccination or small-pox.

"By reducing these figures as nearly as possible to the same scale as those above given for the army of Wurtemberg, we find that of the 4,124 who had previously had small-pox, on vaccination, 1,473 or 35 per cent succeeded; 799 or 19 per cent took imperfectly; and 1,842 or 44 per cent failed. Of the 23,924 who had good marks of vaccination, on re-vaccination 8,976 or 37 per cent took perfectly; 5,277 or 22 per cent imperfectly; and 9,671 or 40 per cent failed. Of the 1,901 with doubtful marks of vaccination, the number of good vesicles on re-vaccination was 777 or 40 per cent; modified, 505 or 26 per cent; and 616 or 32 per cent failed. Of the 2,561 who had no evidence of protection, on vaccination, 1,362 or 53 per cent took; 484 or 18 per cent had modified vesicles, and 715 or 23 per cent failed.

"In the Prussian army, in 1860, 69,096 soldiers were vaccinated. Of this number 57,325 exhibited marks, more or less perfect, of previous vaccination, 7,420 being distinct, 4,151 showed no marks whatever. Of the whole number, 44,193 took, 8,256 partially and 16,047 failed. These last were vaccinated again, when 5,577 proved successful, and 11,650 failed. During the year, there occurred among those who had been unsuccessfully vaccinated and others who had been successfully vaccinated in former years, one case of varioloid, but no case of small-pox. Thus, during the year 1860, out of 69,096 vaccinations, 49,777 or 72 per cent took. In the entire army, there occurred during the year, 23 cases of varioloid, and four of small-pox. Of these cases, fourteen of varioloid and four of small-pox occurred in persons who had not been re-vaccinated; eight of varioloid and one of small-pox occurred among those in whom the re-vaccination failed, and the remaining one of varioloid, among those who had been re-vaccinated with success.

"Dr. J. F. Marson, the experienced superintendent of the small-pox and vaccination hospital in London, states that "but few patients under ten years of age have been received with small-pox after vaccination. After ten years, the number begins to increase considerably, and the largest number admitted are for the decennial period from the age of fifteen to twenty-five, and although progressively diminishing, they continue rather large up to thirty, and from thirty to thirty-five they are nearly the same as from ten to fifteen; but as in the unprotected at this period of life, the mortality is doubled, showing the cause to be probably as much or more depending on age and its concomitants as on other circumstances. In still further advanced life, the ratio of mortality will be seen to increase also, as in the unprotected state."

"According to the statistics of Professors Heim, of Stuttgart, and

Retzius, of Stockholm, and Dr. Marson, of London, the liability of small-pox is found to be, as regards age, very nearly the same as the increased susceptibility to a second vaccination, or as will presently be seen, to a second attack of small-pox.

"The conclusions elucidated from the data given, are:

"1. That vaccination is immensely protective against epidemic diseases generally, and against small-pox in particular; and against death by small-pox, the protective power of vaccination is almost perfect.

"2. That of any number of persons who have had unmodified small-pox, the proportion wholly protected from a second attack at adult age, is 43 per cent, while 57 per cent are liable to it again in some form or other.

"3. That out of any number of adult persons who have good marks of vaccination, 40½ per cent. are perfectly protected, while 59½ per cent. are susceptible to varioloid, or to re-vaccination to such a degree as to render their protection perfectly complete.

"4. That the degree of protection afforded by previous unmodified small-pox, from a second attack, is only 2½ per cent. greater than the protection afforded by vaccination, a proportion too small to be regarded as any evidence of real difference in protective power, and reasonably attributable to spurious or impaired vaccination from a variety of causes, such as vaccination during the progress of other diseases, injury of the vesicle or defective lymph.

"5. That out of any number of adult persons with imperfect marks of vaccination, 23 per cent. only are protected, while 77 per cent. are liable to small-pox or varioloid.

"6. The liability to varioloid after ten years of age, of persons vaccinated under three years of age, and the increased liability again from fifteen to twenty-five years of age, of persons vaccinated or re-vaccinated at from ten to fifteen years of age, demonstrates that, generally, protection by vaccination under twenty-five years of age is complete for about seven years only. Subsequent to twenty-five years of age, protection is complete for a greater length of time, proportionate to the age of the individual at the time of the vaccination.

"7. That during the prevalence of an epidemic of small-pox there is increased susceptibility to the disease, and the degree of protection from previous vaccination is proportionately lessened. Under such circumstances, therefore, it is incumbent to re-vaccinate at intervals not exceeding five years; and in cases of certain exposure as soon as practicable thereafter, as there is abundant evidence of the protective power of vaccination and re-vaccination even as late as the fourth day after exposure to small-pox.

"8. Protection is known to be complete only when fresh vaccine lymph from a perfect vesicle fails to take on re-vaccination."

One very important result of vaccination should not be over-looked. Every medical man knows that not among the least of the dangers resulting from small-pox are to be classed its sequela, among which are scrofula in all its forms, consumption, abscess, and many other diseases; and we believe it to be a well-established fact, that the great diminution of scrofula for the last fifty or sixty years is owing mainly to vaccination.

It would be unjust to close our report without a suitable acknowledgment to Dr. Cyrus Ramsey for the information we have gained from his very full and able article on small-pox and vaccination, contained in the city inspector's report for the year 1863.

In conclusion, your committee would again urge upon the Legislature the importance of early, prompt, and thorough action.

All of which is respectfully submitted.

ARTICLE XV.

On the mutually Antidotal properties of Opium and Belladonna, with cases. By Henry S. Downs, M. D., New York.

Amid the vast field of therapeutical agents familiar to the medical profession, no one is better known to the public, either as a sweet soother of pain, or a banisher of care, than opium and its component preparations; neither is there one more easily procured, not only to allay suffering, but to cut short the vital energies.

Hence it is that the toxical effects of opium, more frequently demand the services of a physician, than those of any other article in the whole range of the materia medica.

In furtherance of my design in offering a paper "On the mutually antidotal properties of Opium and Belladonna," at the last meeting of this Society, I purpose to present a few original cases of opium poisoning treated by belladonna, and belladonna poisoning treated by opium, in confirmation of the valuable discovery of the antidotal relations existing between them.

But few, even at the present time, concede all that is claimed by the most ardent supporters of this doctrine, whilst others doubt, and even discard the strongest evidence, daily accumulating in its favor.

Case First.

I was called October 18, 1864, at 11½ o'clock. P. M., to see an infant, three and a half months old, whose mother had given it, at 5½ o'clock P. M., about one teaspoonful and a half of what she supposed was paregoric, although it proved to be some other preparation of opium, much stronger. The druggist who furnished the article used, claimed that it was an English preparation which he called paregoric, yet it was nearly one-half stronger than the tinct. opii camphorat. of the U. S. P.

The child had never been sick, but its mother was accustomed to give this anodyne to keep it quiet, and produce sleep. About two hours after the administration of the drug, something unusual was noticed in its appearance, and its father sought medical aid. Ipecac, strong coffee and other means were resorted to for its relief, and I prescribed sulphas zinci, on my arrival. There was considerable retching, but no emesis, and it seemed as though the child would go into convulsions. During this narcotic condition, deglutition was very difficult, the pupils contracted to the size of a small pin's head,

the pulse soft and moderate. and the child was only kept aroused from stupor by severe and continued agitation. I gave ten drops of the tinct. belladonna at one-quarter of 12 o'clock, and repeated the dose at intervals of fifteen minutes, until forty drops were given and three-quarters of an hour had elapsed, when the pupils were dilated to double, and in one hour, to treble the former size. The child now began to improve rapidly, and I left at 1½ o'clock. In the morning. recovery was about complete, although an attack of croup set in, which lasted several days.

Case Second.

Mr. W. H. Loines, a reliable druggist of this city, was called to see a stout, fleshy woman, about 35 years of age, who had drank freely of beer, and then taken about one-half an ounce of laudanum for the purpose of self-destruction.

Mr. L. says : I found her one hour after the poisonous dose had been swallowed, partially sensible, and gave as an emetic a half drachm of ipecac. and forty grains of sulph. zinci, with no effect. I then directed one drachm each of ipecac. and sulph. zinc. without effect. No stomach pump being at hand, I now administered four grains of tart. emetic, and repeated the dose in fifteen minutes; still no emesis. Dr. W. W. Jones, who came in at this period, suggested mustard, and it was given freely to the extent of two ozs. Strong coffee was given largely as a drink during the whole period of narcotism.

She was at this time insensible, the pupils being contracted to the size of a pin's point, and in a state of profound stupor, from which no exertion could arouse her. I next gave one drachm of the tinct. belladonna, and repeated the dose in twenty minutes, after which, symptoms of nausea were perceived. Dr. J. then suggested ext. of belladonna, of which two grains of Allen's best English extract, dissolved in water, were given, at intervals of twenty minutes, until six grains were taken. Soon after the third dose, the patient commenced vomiting, and the matter ejected smelled strongly of opium. Sensibility gradually returned, and at the end of eight hours the pupils were natural, the sight restored, and consciousness complete.

Dr. W. H. Thompson has related to me the two following cases :

Case Third.

Dr. T. was called at night to see a woman who had taken about one and a half ounces of laudanum. All the symptoms of opium poisoning were present, except the smell, the skin was moist, pupils contracted, &c. He gave first an emetic, and then a reliable tinct. of belladonna, thirty drops every half hour until ninety drops were taken. The patient recovered rapidly, and in the morning there were no indications of her having taken any belladonna.

Case Fourth.

A soldier, aged 35 years, healthy and unaccustomed to any narcotic, save tobacco, in an attempt at suicide swallowed two ounces of laudanum, and smoked one grain of opium. Three hours afterwards he was found in a comatose condition, with contracted pupils, and slightly spasmodic. His breath smelt of opium, but the vomited matter did not. Forty drops of tinct. of belladonna were given at half hourly intervals, until he had taken 120 drops, and then in half an hour twenty drops more, upon which he began to improve, and entirely recovered in a few hours, without any signs of having taken belladonna remaining.

Dr. Charles D. Hackley has sent me the following case :

Case Fifth.

A soldier, by direction of the regimental farrier, took over an ounce of laudanum for diarrhea. About one hour afterwards I was sent for, and found him very drowsy, face flushed, pulse slow, pupils much contracted, and hands twitching, with tendency to convulsions. Not having any emetic at hand, I gave one grain of extract of belladonna, and repeated the dose at intervals of half an hour, until three grains had been given. Two hours after I first saw him, his pupils had dilated, the pulse and skin were natural, and he was able shortly after to go on duty.

Dr. C. C. Terry has presented the notes of one case of opium, and two of belladonna poisoning, in which the antagonistic properties of the drugs were clearly illustrated :

Case Sixth.

The case of opium poisoning was in an infant eight weeks old, who had been fed on Mrs. Winslow's soothing syrup. The soothing process had been carried so far, that complete recovery was impossible, even by the aid of belladonna.

Case Seventh.

One case of belladonna poisoning occurred in a young woman who used belladonna pessaries for the purpose of allaying the excruciating pains of ovarian dysmenorrhea. The toxical effects were suddenly developed to delirium. One and a half grains of Magendie's sol. sulph. morphia entirely removed the symptoms of poisoning, an hour after the delirium appeared, but the patient did not thank him for returning the ovarian distress.

Case Eighth.

The other case of belladonna poisoning was also from the use of belladonna pessaries.

These pessaries contained four grains each of the extract of belladonna, and were ordered to be used until the sight became affected, or the pain abated.

In each case the luxury of ease from suffering overcame the Dr.'s precautions against injurious effects.

I am indebted to Dr. I. P. Garrish for the three following cases:

Case Ninth.

He says: A child through mistake took one teaspoonful of laudanum, and I found it one hour afterwards in a comatose state, and incapable of being aroused. Ten drops of tinct. belladonna were administered, and repeated every hour until sixty drops were given, when the symptoms of narcotism began to subside, and a slow but gradual recovery took place.

Case Tenth.

I was called to see a man who had two hours previously taken an ounce of tinct. opii for the purpose of self-destruction. He had a feeble pulse, contracted pupils, stertorous breathing, and could not be aroused. I gave an emetic of sulph. of zinc, which produced partial emesis, and then twenty drops of tinct. belladonna were given every hour, until about ninety drops were taken. He then began to show signs of consciousness, and by the aid of coffee, stimulants, and the cold douche, was gradually restored.

Case Eleventh.

A woman, in order to destroy herself, took ten grains of opium. In one hour after I found her in a semi-comatose condition, with pupils contracted. I gave an emetic, and the vomited matter smelled of opium. I then gave twenty drops of tinct. of belladonna every hour, until sixty drops were taken, when consciousness began to return, and she entirely recovered.

The paralyzing effects of opium upon the nerves of the stomach, in some of the above cases, will readily account for the inert action of the most powerful emetics, upon that viscus, until the neutralizing agency of belladonna sufficiently restores it to a normal condition.

The propriety of causing the patient to walk, talk, or use great and constant exertion whilst under the influence of opium, is properly questioned by several writers who have had experience upon this subject; and yet they appear unanimous in the opinion that the application of a nervous stimulant, as electricity, galvanism, and the cold douche, may be very efficient and salutary. The one tends to exhaust and debilitate, the other to revive and resuscitate the vital energies.

The opinion is fast gaining ground that all the therapeutic poisons

known will be found, in process of time, to have their antagonisms and antidotes, as surely and as decidedly, as opium and belladonna, or as strychnine and aconitine, are antagonistic and reciprocally antidotal.

The axiom, that the tolerance of one poison in the system is produced by the presence of another, seems clearly proved in the foregoing cases.

According to Wood and Bache, an ordinary dose of the extract of balladonna is one-quarter to one-half a grain, and of the tincture, fifteen to thirty drops; whilst a dose of opium is one grain, and that of the tinct. opii, twenty-five drops. When, therefore, we find the stomach harboring from ten to fifty grains of the extract belladonna, or fifteen to twenty grains of the murias morphia, without any perceptible or injurious effects being manifest, it will naturally suggest itself to the practitioner that some latent principle is at work, exerting a controlling and modifying influence upon the noxious drug, and neutralizing these otherwise potent elements.

On the other hand, the smaller doses cannot be disregarded with impunity. I have known several instances, as in albuminuria, or uraemia, where death has been attributed to, or accelerated by minute and repeated doses of morphia.

Dr. S. R. Percy, who has experimented on these and a variety of other poisons, informs me that he has known death to occur from 100 drops of laudanum, in a case where there was fatty degeneration of the kidneys, and not sufficient energy in the system to eliminate the poison. The pupils of the patient were contracted to the size of a pin's point, and all the evidence of the narcotic present. The number of drops taken was accurately ascertained, and a post mortem confirmed the diagnosis.

Dr. Anderson has reported a case of belladonna poisoning in the Ed. Med. Journal, vol. v, part 2.

See also Dr. Bells's article on the therapeutic relations of opium and belladonna, in the same journal, vol. iv, part 1.

Also Dr. C. C. Lee in Am. Journal Medical Sciences, January, 1862. on the antagonistic effects of opium and the mydriatics.

In the Med. Times and Gazette, Feb. 7, 1863, a case is reported of poisoning in a child by three grains of morphia, given inadvertently by injection. Caffein was given with temporary benefit, but the patient died in 16¼ hours. Query—Would not belladonna have saved it?

HENRY S. DOWNS, M. D.,
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ARTICLE XIV.

The New Mode of Remedial Inhalation. Abstract of a paper by Louis Elsberg, M. D., of New York city.

Inhalation as a therapeutic measure has in this country been mainly in the hands of quacks. Notwithstanding scientific records, from the writings of Hippocrates (see Opera Hipp., Fabius Calvus trad., De Morbis, liber II, p. 286,) to the present time, have shown its occasional good effects—notwithstanding some of the most eminent of our own earlier physicians have used and highly recommended it—finally, notwithstanding the improvements that have been made in its methodical employment, and the practical triumphs it has achieved in Europe during the last ten years, the profession here has not yet admitted it on the list of its regular remedial resources.

It seems strange, but the fact is that empirical imposters have generally been allowed to monopolize this common sense mode of medicating the respiratory organs. The cause of this apparent professional prejudice against inhalation may be that its advocates have almost always claimed for it too much. It was promised to be a specific, a radical cure, a panacea for diseases that had ever proved themselves the most insidious, obstinate and dangerous. At several successive periods taken up with the utmost enthusiasm, with the most exaggerated expectations, and the most absurd demands, failure and disappointment each time soon followed. But what did these demonstrate? Certainly not the worthlessness of the method, even if they did evince ignorance and shortcomings on the part of its advocates. At last, abandoned by the profession, inhalation fell into the hands of empirics, and, commending itself to the common sense judgment of the popular mind, and doubtless effecting occasionally positive good, even as practiced by unworthy apostles, the public, in this country, became more and more disposed to look very favorably upon it just as the profession discarded it more and more.

In the present essay I do not propose to follow up the history of inhalation, nor even to detail its various methods. I desire to call the attention of the Society only to the inhalation of *nebulized liquids*. This constitutes emphatically the new feature of inhalation, and with convenient apparatus completely supplies the desideratum for its efficient therapeutic employment.

The nebulizing of liquids consists in dividing each drop into such

immumerable fine particles that, forming a nebula or spray, suspended in or mixed with the air, it may be freely inhaled. Before its introduction, inhalation was necessarily limited to few medicaments. So much danger had been found to attend most attempts at loading the respired air with medicinal powders, that gases and vapors alone were deemed applicable. The steam of water, the fumes of burning rosin, the smoke or gas evolved by heating various other articles, the vapor of volatile substances, and the natural gases at ordinary temperatures, comprised the full list of the materia medica for inhalation. Some of the very substances regarded as most desirable for the direct medication, could therefore not be brought to the bronchial and pulmonary mucous membrane. Nor could the temperature of the remedial agents to be inhaled be properly regulated. By the new mode we can avail ourselves of every medicine that is liquid or that can be rendered so by solution.

The questions that I shall briefly pass in review are—

1. Does the nebulized liquid really enter the respiratory organs?

2. What is the best apparatus for nebulizing liquids?

3. What is the best mode of conducting the inhalation of nebulized liquids?

4. What are the indications for and the therapeutic value of the inhalation of nebulized liquids?

I. Does the nebulized liquid really enter the respiratory organs? This question, after being warmly and obstinately contested for years, has been finally settled in the affirmative. The experiments and arguments brought forward in support of the negative have been so overwhelmingly disproved, that, aside from the positive demonstration which the laryngoscope enables us to make to the satisfaction of any one, it is at this day hardly necessary to enter into details on the first point at issue. If a colored liquid be nebulized and inhaled, the discoloration can be traced, in individuals favorable for laryngoscopic examinations, to extend through the larynx and trachea as far down as the eye can reach. Numerous observations on animals, on artificial apparatus representing the human air passages as well as on men, place it beyond a doubt that the nebulized liquid really penetrates the respiratory tract. But, how far does it enter? how much of it penetrates? how or in what form does it come into contact with the mucous membrane? The opponents of inhalation, when forced to admit the general fact of the penetration into the larynx and trachea, still contended that the nebula did not penetrate to the bronchial tubes and lungs—that too small a quantity entered to do any good—that the liquid entered not as a fine spray, but in the form of condensed, consolidated drops—finally, that the inhala-

tion was attended with too much danger to be justifiable. After the nebulized liquid is once safely in the trachea, there is no obstacle in the way of its further progress. It mixes so intimately with the atmosphere and follows a current of air so easily, even immediately after leaving the apparatus in which it is generated, that unless it should be supposed to be condensed and absorbed by the walls of the trachea, no reason could be imagined why it should not penetrate wherever the air does. By holding a hard-rubber funnel, to which a long elastic tube is attached, so as to catch the full spray of a nebulizer, and by suction starting a current, every one may satisfy himself that the nebula, as such, traverses a tube longer and more unfavorably conditioned than the human air passage with its ramifications. From this experiment we may also conclude that the liquid enters the pulmonary mucous membrane in the form of a very fine, uniform, and elastic nebula. The further up from the lung, the more condensation takes place, and the more the liquid acts in the form of drops; the lower down, the less in quantity of the nebula enters, but the less condensation occurs. The question as to the quantity of the nebula which enters, has given rise to very ingenious experiments, but that quantity can only be approximately determined, and varies very greatly according to the individual inhaling. With the head and tongue in proper position, an appreciable quantity usually enters on deep inspiration through the mouth. On chemical examination, free iron has been found in the contents of a pulmonary cavity, which iron had been inhaled as nebulized liquor ferri sesquichloridi shortly before death. As the result of numerous calculations it may be assumed that, under favorable circumstances, from one to two ounces of liquid passes the superior aperture of the larynx when inhaled in the nebulized state. That a much smaller quantity coming into direct contact with a mucous membrane produces its effects, we have daily proofs. As to the injurious effects of inhalation, the fears of which some have urged in opposition to the practice, I may say that I have never actually observed any, though they will doubtless follow improper, incautious application. The very production of harm would prove the effectiveness of the method, and the possibility of also producing good under suitable circumstances. Not *a priori* prejudices, but scientific and careful experiment and experience alone can determine the therapeutic value of any measure.

2. What is the best apparatus for nebulizing liquids?

To Salès Girons belongs the honor of having introduced the new mode of inhalation. Although others had before contrived various means of nebulizing or as the French improperly call it "pulverizing"

liquids, he was the first who constructed a portable apparatus for the purpose and made its usefulness widely known. His apparatus consisted essentially of a strong bottle or flask, not quite filled with the liquid to be nebulized, the neck of which contained an air-pump, by means of which the liquid was forced so violently through a capillary tube against a convex plate, that it was divided into the finest spray. Soon after the Paris instrument maker Mathieu, at the suggestion of Tirmann, made an apparatus which in contradistinction to Salès Girons' "*Pulverisateur*" he named "*Nephogène.*" This nebulizes liquids not by throwing them violently against a solid body, but by forcing them under high pressure through a capillary tube in connection with compressed air. It consists of a glass globe containing the liquid and a force-pump and strong metal globe for compressing the air; on opening the stopcocks of the connecting tubes the liquid and air rush with great force through a fine opening in the form of spray. Salès Girons' and Mathieu's instruments became the prototypes of a great number of modifications and simplifications, all that followed operating either on the principle of the one or on that of the other. Each of these has its specific advantages and disadvantages, and it was a happy and ingenious idea, independently carried out by Waldenburg and Lewin, to contrive apparatus combining both principles. Each of them has succeeded in supplying a very valuable and convenient apparatus for office practice, Lewin's being of glass, enabling us to use nitrate of silver and other medicaments that could not be nebulized well in Waldenburg's. Bergson has entirely simplified Mathieu's nephogène, and in Schnitzler's instrument *a la* Salès Girons', the plate giving the spray is held in the patient's mouth. I was the first who on Mathieu's principle used steam instead of compressed air, and Siegle, Lewin and the celebrated Vienna instrument maker, Leiter, also constructed steam nebulizers. Bergson's apparatus was modified into a pocket instrument by Weil, Charrière and Lewin, after the final simplification of the latter, by whom I have had the "pocket nebulizer" made, which accompanies this paper. It is so simple that it requires but little description. Two hard rubber pipes, the opening of one twice as large as that of the other, are directed towards each other at a right angle, so that the smaller reaches up half across the opening of the larger. By immersing the smaller tube in water or medicated liquid and blowing a stream of air through the larger, the air in the smaller is rarified or exhausted, liquid rises and each drop as it reaches the top is nebulized.

Instead of blowing with the mouth, a rubber ball may be attached with air chamber, making a continuous current, and to prevent wet-

ting the patient's face, a glass inhaler like a uterine speculum or a funnel may be used.

3. What is the best mode of conducting the inhalation of nebulized liquids?

Although the fact that nebulized liquids may be inhaled into the lower air passages can not be doubted, it is true, also, that unless certain rules be observed, the inhalation will not succeed. These rules depend on the physical properties of the nebula and the anatomical and physiological condition of the upper respiratory tract. The patient may be in either the erect, sitting or lying posture, though I have usually found that sitting comfortably before a table on which the apparatus rests is most convenient. The head must be so held that the current passes directly into the widely opened mouth. The tongue must be on the very floor of the oral cavity, which some individuals can best accomplish with and some without protruding it beyond the front teeth. The nose is closed either with the finger or with my little nose-pincher and the patient directed to make slow, steady and deep yawning inspirations.

Breathing in this way carries the nebula usually through the smallest bronchial ramifications into the lungs. With many patients we will not at once succeed in this, they must be gradually educated to breathe properly. I frequently keep the nose open for the first few times, dyspnœa and cough occurring much more easily when the nasal passage is closed. When most of the effect is desired upon the upper air-passages, the patient need not respire so profoundly; and when the nebula is to act upon the nasal mucous membrane, breathing through the nose (sometimes with closed mouth) is preferable.

The inhalation should never be carried on if the patient is either physically or mentally excited. The first half hour, and in some persons the first hour, after meals or any exertion should be avoided.

To repeat the inhalation once a day is usually sufficient—though if the case be urgent, as, for the stoppage of hæmoptisis, two or even three times is not too much. Each inhalation with appropriate intervals of rest, may last only a few minutes or may be gradually extended from half an hour to an hour. Individual peculiarities, the nature of the liquid used, and the requirements of the special case in hand must determine all these particulars, however.

4. What are the indications for, and the therapeutic value of the inhalation of nebulized liquids?

Nebulized liquids are brought by inhalation into contact with the oral and nasal cavities, with the palate and pharynx, the larynx and trachea, the bronchial tubes and lungs. Other things equal, they produce the more therapeutic effect, the higher up the organ affected is situ-

ated. The instruments like that of Mathieu, which project the nebula with considerable force are more applicable for medicating the oral cavity, pharynx, epiglottis and the neighborhood of the upper aperture of the larynx, while those that have a plate like that of Salès-Girons', against which the force of the current is expended, allows the nebula to follow a little more easily the inspiratory effort which is to carry it into the lungs.

1. *Disease of the Nasal Cavities.*—In cases of catarrh, in which rhinoscopical examination had determined the diagnosis, excluding profound ulceration and caries of bone, I have obtained the most satisfactory results with inhalation. The most inveterate chronic catarrh—often an opprobrium of the general practitioner—and ozœna have often yielded to the simplest medicaments, such as solution of alum, chlorate of potash, chloride of ammonium, common salt, &c., nebulized.

2. *Disease of the oral and pharyngeal cavities.*—These constitute in all cases, indications for the use of nebula; the superiority of inhalation over the modes of medication is in no instance more obvious than in those chronic cases of follicular pharyngitis, which so frequently resist all other local and general treatment directed against the elevations on the posterior wall of the pharynx. The ordinary forms of syphilitic sore throat are also best treated with nebulized liquids, (various solutions of preparations of iodine and mercury.)

3. *Diseases of the Larynx and Trachea.*—The various inflammations of the larynx and windpipe, catarrhal, exudative, syphilitic and tuberculous are nearly always if not cured, certainly greatly relieved. In several cases of catarrhal laryngitis, in which so much progressive dyspnœa was present that tracheotomy seemed alone to offer the slightest chance of prolonging life, the inhalation of nebula, especialy of very high temperature, has succeeded. The same thing can be said of croup, and still more emphatically of diphtheria in its first stages. Trousseau has reported two cases of œdema glottidis cured by inhalation of nebulized solution of tannin, one of which at least was desperate, without recourse to tracheotomy.

4. *Disease of the Bronchial Tubes and Lungs.*—In acute and chronic bronchitis, especially obstinate bronchorrhœa, hooping and some anomalous cases of cough and asthma, I have employed the method to good advantage Symptomatic improvement has been reported also in cases of bronchectasy and emphysema of the lungs. Against pulmonary consumption, inhalation of nebulized liquids certainly offers a mode of medication which if taken up in the proper scientific spirit of careful inquiry and cautious experiment, may lead to important results. At all events hæmoptysis is wonderfully con-

trolled by it, (solution of alum, tannin, sesquichloride of iron, or more powerful of all, dilute solution of persulphate of iron.) Mascagni, a hundred years ago, declared that "if ever a specific should be discovered against phthisis, it must be introduced into the system through the air-passages."—the means of introducing it we now have at our command, but where is the specific medicament?

ARTICLE XVII.

Report on the Condition of the Insane Poor in the County Poor Houses of New York. By SYLVESTER D. WILLARD, M. D., of Albany.

To the Honorable the Legislature of the State of New York:

As Secretary of the Medical Society of the State of New York, I was authorized by an act passed on the 30th day of April, 1864, to investigate the condition of the insane poor in the various poor houses, alms houses, insane asylums, and other institutions, where the insane poor are kept, not including, however, such institutions as are now required by law to report to the Legislature of the State.

The law* directed that I should arrange a series of questions, such as in my judgment would be likely to elicit the greatest amount of information on this subject, procure them printed, and transmit them to each county judge in the State. It directed the county judge on the reception thereof, to appoint a competent physician, a resident of the county, to visit the county poor house, or institution where the insane poor are kept, and to examine into the condition and treatment of the insane inmates, and to transmit the result of the investigation to the undersigned. It directed me, thereupon, to condense the information so received, and report the same to your honorable body.

Previous to entering upon this duty, I visited Dr. John P. Gray, the Superintendent of the New York State Asylum at Utica, and Drs. George Cook and John B. Chapin, Superintendents of Brigham Hall Asylum for the insane at Canandaigua, for the purpose of conferring with them, relative to the more important facts that should be developed by this investigation, with a view to the practical results to be attained by it. It is proper, though almost needless to remark, that the plan of this investigation met the cordial approbation of those gentlemen, together with the kind offer to bestow any assistance they could render to facilitate so important a labor. It is unnecessary to speak in this report of the cruelties that were practiced upon the insane in a less civilized age, but the object will be so far as possible to direct our attention to the misery and wretchedness that still exist, in the hope of inducting measures for its aversion in the future.

*It is due to acknowledge that this investigation was instigated by Dr. Wm. H. Richardson, of Essex; Dr. C. M. Crandall, of Allegany; Dr. W. H. Barnes, of Columbia, and Dr. Julien T. Williams, of Chautauqua, Members of Assembly, on the committee of public health in 1864. They were all earnest in support of the measure.

The attention of the Legislature was drawn to the condition of the insane poor in 1857, by an elaborate report of the select committee of the Senate, appointed in 1856, to visit the charitable institutions supported by the State, and city and county poor and work houses and jails. The committee consisted of Senators Mark Spencer, George W. Bradford and M. Lindley Lee. They entered with enthusiasm upon their mission. Their visits were made during the summer, when the population of the poor houses was one quarter less than in winter. It is apparent, therefore, that they did not witness the suffering incident to winter, when the sleeping rooms would be over-crowded, when the want of fuel, and bedding and clothing would be most felt. But the miseries in which they found the insane poor confined in the various county poor houses are appalling, and shocking to record. Doubtless that report stimulated some of the county authorities to remove to some extent the stigma and disgrace it fastened upon them, but it led in most instances to no permanent improvement, nor did the State act in view of it to a more ample provision for these unfortunates. The Medical Society of the State has likewise in years past, directed the attention of the Legislature to the importance of more ample provision for the insane, but its suggestions have been likewise unheeded.

The New York State Asylum at Utica, is an institution in every respect worthy of the great State by whose liberality it was erected, and is now supported. Grand as is the scale on which it is conducted, it is not sufficient to meet the claims that are made upon it.

In order to make room for recent cases, and such as afford promise of relief or cure by treatment, and those are constantly urging for admission, and humanity demands that they shall not be turned away, it becomes necessary for that institution to return to the counties by which they have been supported at the asylum, many chronic and incurable cases. Such insane persons are therefore sent to the county poor houses where others are confined who have never been able to gain admittance at the State Asylum, or who have been untimely removed for new patients. In many of the county houses there are a large number of the insane inmates who have never been sent by the authorities to the asylum. *Indeed the law gives county officers no authority to send cases of more than one year's duration to the State Asylum.* In many instances the counties have had little or no disposition to send recent cases there, prompted by the idea that they can be supported at a less expense in a county poor house. The State has grown immensely in population, and in due ratio the number of its insane have increased, until its State Asylum is filled to its utmost

capacity, and the tide of its overflow has set back upon county poor houses; and they too, have become filled to an excess of human misery, degradation and wretchedness that wrings a cry of distress from the heart of every philanthropist. These evils have become so great and so glaring, that they are a stigma upon the class of our charitable institutions where insane poor are confined, upon our communities, and upon the fair name of our State. It is in vain that we any longer attempt to conceal the true condition of lunatics in county poor houses, or to pacify the pleadings of humanity in their behalf, with the excuse that a great war is involving our public attention, and that we cannot remedy their condition now. Humanity will listen to no such false representation. Truth will not bear testimony to such an excuse. The facts elicited by this investigation are too appalling to be forgotten, and too important to be thrown aside. Repulsive to our sensibilities, as many of the facts set forth are, the investigation was made in the summer when the suffering from want of care and clothing is less than in winter, and consequently it does not show the state of things as bad as they really exist at some seasons of the year.

The following is the series of questions sent to each county.

What is the population of your county house?

How many insane are there at present provided for?

How many males are capable of labor?

How many females are capable of labor?

How many males perform out of door labor?

How many females perform out of door labor?

What amusement have those who are unable to work?

What amusement have females who are unable to work?

What number are destructive and tear off their clothing?

How many are restrained by chains or hand-cuffs occasionally?

How many constantly?

What other forms of mechanical restraints are used?

What other means are resorted to for controlling and managing the violent insane?

Has the poor house a full supply of water?

How many bath tubs are there in it?

How often are the insane required to bathe?

Is each insane washed, hands and face, daily?

Is any arrangement made for cleanliness, ventilation and uniformity of heat in winter?

Are any insane confined in basement cells?

Are any so confined without the privilege of coming daily into the open air?

Is the building in which the insane are confined of wood or brick?

How many stories?

What is the height of each story?

What is the length and width of each room?
What is the size of each window?
Are there any rooms without a window opening out of doors?
What are the floors made of?
Are any of the basement rooms without a floor?
Have you bedsteads in all the rooms?
Are the bedsteads of wood or iron?
Are they fastened to the floor?
Have you double or single beds?
How many sleep in one bed?
What is the greatest number, in any case, who sleep in one bed?
What material do you use for bedding?
How many sleep on straw alone, without bedsteads or beds?
How often is the straw changed?
What is the diet provided each day?
How is it distributed to each?
How is the building heated in winter?
Are all the rooms heated?
Is attention paid to the uniformity of heat by a thermometer?
What is the temperature maintained?
Are any insane confined in rooms without heat, in the winter?
Are there any accommodations for the various grades of insane?
If so, what?
Are they all confined in one ward?
How many in single rooms or cells?
Are the sexes kept entirely separated?
Are male attendants employed to care for female insane?
Are any attendants beside paupers uniformly and constantly employed in the immediate care of the insane?
What is the actual condition of the rooms and cells occupied by insane, as to cleanliness?
What do you think of the atmosphere of the rooms?
Did you look for vermin on their persons?
Did you observe any?
Are any of the pauper insane cared for in private families?
Does your county take care of recent cases?
What changes of under garments have each of the insane?
How many have shoes?
How many had neither shoes nor stockings during the winter?
What number of insane is your county house designed to accommodate?
What is the greatest number ever there confined?
Are the accommodations separate from those of the sane paupers?
How many escaped within a year who were not returned?
How many were removed by their friends?
What provisions are made for medical treatment of the insane?
How often are they actually visited?
Does each case receive care with reference to its ultimate recovery?
Number; name; age; sex; native; foreign; year of admission; occupation; mild; excitable or paroxysmal; violent; filthy; de-

structive; confined to house; confined in strong rooms; requires mechanical restraint; been treated in an asylum; died during the year; discharged.

The direction to the physician appointed by the county judge is as follows:

MEDICAL SOCIETY OF THE STATE OF NEW YORK: }
ALBANY, N. Y., *May*, 23, 1864. }

Dr. ————.

Sir—In obedience to the appointment made by the judge of your county, in accordance with chapter 418, Session Laws 1864, a copy of which you will find herewith, you are requested at an early day to visit your county poor house, alms house, or asylum, and make the investigations as indicated in the blanks enclosed. You are requested to give the overseer or superintendent no notice of your appointment or the time of your visit, and upon your arrival to enter at once upon the duties assigned to you. The object is to see every insane inmate, and all the surroundings precisely as they exist in the every day condition of the institution, to discover the evils which exist in the management of the insane poor, and by this well directed effort so bring them to light as to incite a wise and generous legislation in respect to them, with such actual provision for this unfortunate class of our fellow beings as is in accordance with the teachings of science, and the dictates of an enlightened humanity.

Your services will be a claim upon your county, to be audited by your board of supervisors on the voucher of the county judge.

You can retain one set of the blanks for your own personal use, one for the use of the county judge, one for your board of supervisors, and return the remaining two to me, on or before the time specified in section 2d.

Very respectfully yours,
S. D. WILLARD, M. D., *Secretary.*

Returns have been received from all the counties but Onondaga, Clinton, Wyoming and Hamilton. The city and county of New York, among her great public charities, maintains a large and well conducted asylum for the insane on Blackwell's island. Kings county has also provided properly for her insane poor, and these two counties were not embraced in this investigation.

Oneida county feels the influence of the State asylum, and hence has an institution more satisfactorily conducted than in any of the other counties.

The earnest attention of the Legislature is requested to the subjoined report for each particular county. The facts have been furnished in accordance with the law by a competent physician, resident in the county, who would have no motive for representing them unfavorably.

It is not my intention to set forth fully all the evils that are brought to light by this investigation, in the condition of the insane

poor, but to notice briefly a few of the more prominent ones, and then suggest a remedy for these terrible abuses.

The investigation shows gross want of provision for the common necessities of physical health and comfort, in a large majority of the poor houses where pauper lunatics are kept. Cleanliness and ablution are not enforced, indeed, very few of the institutions have even the conveniences for bathing, and many of the buildings are supplied inadequately with water. In a few instances the insane are not washed at all, and their persons besmeared with their own excrements, are unapproachably filthy, disgusting and repulsive. In some violent cases the clothing is torn and strewed about the apartments, and the lunatics continue to exist in wretched nakedness, having no clothing, and sleeping upon straw, wet and filthy with excrements, and unchanged for several days. The number of these cases may not be large, but there should be none such. There exists gross inattention to ventilation, and in frequent instances these unfortunates are denied even the fresh air of heaven. The buildings in many instances are but miserable tenements and were erected without any regard to ventilation. It is impossible from their very construction and arrangement to procure uniformity of pure air, and thus another great principle of health is denied. It will be observed that the returns not unfrequently mention the air of the rooms as "foul," "bad," "unhealthy."

In some of these buildings the insane are kept in cages, and cells, dark and prison like, as if they were convicts, instead of the life-weary, deprived of reason. They are in numerous instances left to sleep on straw like animals, without other bedding, and there are scores who endure the piercing cold and frost of winter without either shoes or stockings being provided for them—they are pauper lunatics, and shut out from the charity of the world where they could at least beg shoes. Insane, in a narrow cell, perhaps without clothing, sleeping on straw or in a bunk, receiving air and light and warmth only through a diamond hole through a rough prison like door, bereft of sympathy and of social life, except it be with a fellow lunatic, without a cheering influence, or a bright hope of the future! Can any picture be more dismal, and yet it is not overdrawn.

There are but few of the poor house asylums that have any provision for exercise in the open air, or sufficient yards or grounds for it. The mild cases wander about often where they please, but not so the more violent, and in stormy or winter weather all are kept housed together. No system of exercise is established, no amusement is furnished for the weak, the feeble, the melancholic. Each one is allowed to dwell upon and magnify the evils of a disordered

mind, and thus become more distressed, confirmed, incurable, demented. No amusements are furnished, no pleasant occupation devised. The violent have only to rave and become more violent, and pace in madness their miserable apartments. These institutions afford no possible means for the various grades of the insane; the old and the young, the timid and the brazen, the sick, the feeble, and the violent, are herded together without distinction to the character or degree of their madness, and the natural tendency is for all to become irretrievably worse.

There is no uniform system of mild government and restraint of lunatics in poor houses. The attendants for the most part employed to care for them are the pauper inmates of the establishment! Paupers, who in many instances are depraved by vice, cold, sordid, selfish from poverty, utterly incapable of taking care of themselves; these are employed to oversee and apply moral and physical means of restraint for the insane! To paupers is committed the task of carrying them food and supplying their daily wants. The consequences are the most wicked and cruel neglect, and not unfrequently brutal treatment of these unfortunates, and the punishments inflicted on them are arbitrary, cruel and undeserved. There is an utter destitution of well trained, kind, efficient attendants. The mingling of sane and insane paupers, the male attendants in some instances in the care of female insane, and the commingling of the sexes, in no way promote either restoration or virtue.

Where recent cases are received into a poor house no special attention is generally given to them with reference to their ultimate recovery. The medical attendance is so embarrassed by want of means for general care, that it is impossible to arrive at any satisfactory management of the insane, and it proves as unsatisfactory to the physician as it is without benefit to the patient.

Few of the interior counties have more than thirty lunatics, and several less than twenty. It is impossible to maintain an asylum efficient in all its apartments with such a small number. It would incur an expense quite too large and unnecessary, without commensurate advantage to the inmates.

His Excellency Governor Fenton, in his message to your honorable body, alludes to this subject as follows:

"The Legislature of 1864 directed an investigation into the condition of the insane poor confined in the various county poor houses. A report, by Dr. S. D. Willard, will be duly presented, showing the deplorable condition of this most unfortunate class. There are in fifty-five counties, not including New York and Kings, thirteen hundred and forty-five lunatics, confined in poor houses or poor house asylums, nearly all of whom are incurable; many have become, and

others are fast becoming incurable, from inefficient care and treatment. The time has arrived when Legislative provision for them should be made. The propriety of establishing an institution for *incurables*—an institution that shall relieve county authorities from the care of the insane, should be deliberately considered.

"More than one fourth of this number of insane are capable of some labor. To what extent that labor, organized and systemized, might be made productive in the maintenance of an institution, under well directed medical superintendence, is likewise worthy of consideration."

The suggestion of His Excellency seems entirely practical and economical. Let an institution for incurables be established. Let the incurables be there colonized. Take the insane from the counties where they are ill provided for first, and change the law relative to the insane poor, so that counties shall not have the management of them, nor any authority over them. The statistics gathered show that out of 1,345 insane, 345 are capable of labor; properly managed, this number would be increased, and there would be gathered into such an institution scores of mild cases now at large, whose friends, unable to support them at the State Asylum, are unwilling to consign them to the miseries of the poor house. By such a regulation, the cost of supporting each insane person would be diminished, so that the expense to each county would not be greater, and probably much less than it now is, while the lunatics would enjoy the benefits and comforts of a well regulated institution. The early attention to their care would doubtless insure recovery to a much larger number than now become restored, and cases that progress to violence, filth or dementia, might remain mild and passive.

It is a fearful thought that, among the poor, parents who from the ills of life suffer mental alienation, fathers depressed from losses and anxiety, mothers exhausted with child bearing and the rearing of a large family, the youthful, from vice or disappointed hopes, and the foreigner among strangers, looking wistfully back to his native home, that these, all suffering from disease which might be stayed, should be thrust into miserable poor houses and almost compelled to suffer the miseries of incurable lunacy. It is not pretended that all such inevitably become confirmed lunatics. Some indeed, recover, but the ratio would be greatly increased with more adequate measures for their care.

It not unfrequently happens that the most important plans for the advancement of either science or philanthropy must be approached and developed through the channels of political economy. To what extent, therefore, is it economy to give the insane of every class the advantages of treatment in a well managed asylum—in an institution conducted on principles of science? And to what extent is it a want

of economy to place those who are mentally deranged in circumstances that tend to make them confirmed lunatics? It is not asked to what extent are these propositions humane, but, in dollars and cents, what is economical. The following calculation is based on authentic statistics :—

For example: Of one hundred cases of recent insanity, placed under immediate care and treatment in a proper asylum, about eighty will recover, and the average period will be six months, at a cost of $5 per week, $130; add for transportation, $20, making $150 each, or $15,000 expense to the State. But, argues the narrow-sighted official, "they can be supported at the county house for $1.75 per week." It is true, and of the one hundred cases, about seventy will thus become confirmed lunatics, and the average duration of life will be eighteen years, and the cost will be $1,638 for each person, or $114,660 for the seventy. At $2 per week, the cost would be $131,040. All this misery, and seventy incurables, with a tax of $131,040, against eighty cured, with a tax of only $15,000. Is the economy then in favor of the poor house system of care?

Again: The difference in the value of an acre of ground in the heart of the city of New York and on a western prairie, is owing to the greater density of able bodied and clear minded population on the former. The life of each individual has a financial value in the development of the wealth of a State. Horace Mann, and Dr. Alexander H. Stevens have fixed this value upon individual life at $150 per year. At the present time this would be a very low estimate, but by this estimate, eighty lives of usefulness saved, each for a period of seventeen years, would add $204,000 to the wealth of the State. This includes nothing for the natural increase of population, which would swell the sum to millions in a single generation. Is it not conclusive that the present system of poor house care for the insane is a financial madness, of which no man in his right senses should be chargeable.

The question might be presented with reference to humanity, or advancing another step in the light of christianity, but in that light the false economist would wither as if scorched by the lightning's fire.

I have thus accomplished the services imposed upon me by the Legislature of 1864. In presenting the result of my labors to your honorable body, I have to beg that you will accept it as a plea from those who, deprived of reason, locked in filthy cells, breathing impure air, neglected and destitute, cannot approach you; I present it in behalf of my profession, who are constant in urging the claims of humanity; I present it as a duty I owe the State of New York; nay,

more; I present it as a duty I owe the Divine Master, who, when upon earth, healed the sick, visited the poor, and made the lunatic to appear clothed in his right mind.

Very respectfully your obedient servant,

SYLVESTER D. WILLARD.

Secretary of the Medical Society.

County Poor Houses.

ALBANY COUNTY.

The year embraced in the report of the Alms House Insane Asylum is for September 1, 1863, to September 1, 1864. The number of paupers varies from four hundred and twenty-five in summer to six hundred and fifty in winter. There have been during the fiscal year one hundred and fifty-five lunatics in the poor house asylum. The ratio of insane is about one in four. Fourteen have died; twenty-eight have been discharged. Ninety-nine of the whole number were mild cases; twenty-one were filthy; sixty-two were males and seventy-three were females; fifty-seven were native and eighty-eight of foreign birth. All have been admitted since 1848. Of the whole number only nine had been treated in the State asylum. Twelve males and twenty females were capable of labor. The large number who were unable to work had no amusement or employment. Only six were destructive to their clothing, and required the straight jacket restraint, or locking in cells. The house has two bath tubs, one for each department, and a full supply of water from the city water works. The insane are required to bathe weekly, and to wash hands and face daily. The rooms are supplied with iron bedsteads, and straw in ticks for bedding. The diet is intended to be ample, and all who are able go to a common table to eat. The change of clothing is made every week. The rooms in summer are well ventilated. All have shoes in winter. Twelve escaped during the year who were not returned; three were removed by friends. The asylum *was built to accomodate thirty-one* lunatics. There are in confinement at the present time in this space, designed only for *thirty-one*, ONE HUNDRED AND THREE. The greatest number in confinement at any one time was ONE HUNDRED AND TWENTY, designed to accomodate thirty-one!—the alms house asylum of the capital! of Albany!! Dr. W. H. Bailey, who made the inspection, remarks: "The asylum is a modest two-story and basement brick structure, entirely separated from the other buildings in which are the county poor. There is a small yard for the males and another for the females, into which those who are able may go at pleasure, but the yards are

too small and too barren either for the health or amusement of the inmates; that for the males is 53x90, and that for the females 84x102 feet. In them there is neither a tree or a shrub to shield them from the scorching sun in summer, nor a bench or a seat on which to rest. They are inclosed by a close board fence about twelve feet high, over which the inmates cannot see, and they stretch themselves on the ground like animals, or creep under the shade of the prison-like enclosure. The sexes are separated; the males occupy the first and the females the second story, the dining room for each sex being in the basement. The sleeping rooms open on each side from a hall extending through the centre of the building. Each of these rooms is lighted by a window. The halls are heated by hot air from two furnaces in the basement, and the rooms receive heat through the doors from the hall. Unless the weather is severe, the heat is ordinarily sufficient, and the unfortunate inmates are comfortable. All who are able are compelled to leave their rooms and occupy the halls during the day time. I regard it as unfortunate that some arrangement was not made in the construction of this building for the weak and feeble. When a lunatic is sick or feeble the heat from the hall is often insufficient, unless the door is constantly open, which is to expose the patient to the noise and gibberish of fifty insane and demented, who are congregated in a single room, making it resound with their vacant laughs and shouts. In summer the windows are a ready and effectual means of ventilation, but in winter the furnaces are not of sufficient capacity to permit a flow of cold fresh air sufficient for the requirements for health. The basement rooms have no means of being warmed or ventilated. In these the boisterous, the vicious and the violent are confined. None are confined here continually; but every new patient is placed here for two or three days *for the purpose of becoming acquainted with his habits.*"

Dr. J. R. Boulware, the present efficient alms house physician, in his recent report to the common council, says:

"The insane asylum was built originally to accomodate seventeen females and fourteen males. There are thirty lodging rooms intended for the inmates, and each room was made of the smallest dimensions, compatible with the physical health of a single occupant, nor was it ever intended that more than one should be put into a room. We are now compelled to crowd from three to five of these creatures, who are in the greatest state of helplessness and dependence, into one room, also obliged to use some of the small, damp, air-tight cells, which are below ground, as lodging rooms, whose aerial capacity was never more than barely sufficient to sustain the health of one individual, thus making it appear that the Alms House physician, or those responsible for the management of this important and most sacred of all trusts, are not only willing to leave them in the unfortu-

nate condition of insanity which simply makes them suitable for entrance into an Insane Asylum, but add to it the greater misery which results from the loss of bodily health. This loss of health is but the natural and inevitable result of such abuse. To realize more fully the important bearing of this subject, every individual should make a practical application of it to himself, and imagine a kind relative or dear friend as one of the one hundred and three who are compelled in cold or stormy weather, to crowd into a mere hall or passage way, whose cubic dimensions are such that the air, in twenty minutes, becomes vitiated and rendered unfit to support health, and in the course of the day becomes in the highest degree deleterious and loathsome.

Think of the effect, mentally, physically and morally of promiscuously huddling together so large a number of individuals, of all grades of insanity, from mere partial mental derangement, to that complete idiotcy, where nothing is left of that intellectual force by which *man* is characterized and distinguished from the *lower* order of *animals*. Many of them obeying the calls of nature without reference to time or place, some perhaps in convulsions, others roaming whilst the timid and retreating are trying to escape from the screams and vociferations of the more turbulent. There being no provision for their proper classification, the noisy, the violent, and the filthy; the quiet, the timid, and the convalescent, have to remain in this hall together during the long weary hours of the day.

The standing committee of the Association of Medical Superintendents, in their report on the construction of hospitals for the insane, say that apartments provided for the confinement of the violent insane, should be entirely above ground, and when used for a single patient, should contain not less than 960 cubic feet of air, nor should the ceiling be less than twelve feet in height, with a window communicating directly with the external atmosphere, and well ventilated. Now I find on measurement that these cells instead of containing 960 cubic feet of air, contain about 760 cubic feet, instead of the ceiling being twelve feet in height, it is but seven feet, instead of being entirely above ground *they are nearly entirely below ground*, and instead of being well ventilated, *they are made air-tight*. In these cells the violent insane, whose insanity is manifested paroxysmally, are temporarily confined until their paroxysms of excitement have subsided. Frequently they have to be confined in these damp, air-tight cells twenty-four hours, when the air becomes vitiated by the offensive exhalations and excrementitious matter. The ingress of air shut off, the effluvia in the cell prevented from escaping, the helpless inmate is thus compelled to breathe into the system this poisoned air, twenty-four or perhaps forty-eight hours, and the effect is not only ill health and a stupid mind, but the prostration of all the powers of the individual, both physical and mental, is the unavoidable and inevitable consequence; and this *dreaded cell* becomes the alembic, in which is double distilled their most bitter cup of affliction.

This picture sad as it is, falls short of presenting this matter in all of its unpleasant features, but enough has been said to make it appa-

rent that this building is entirely inadequate to afford that relief to those for whose aid this department was designed.

Were your honorable body fully aware of this matter as it really exists, I cannot but suppose that the warmest sympathies of your nature would be aroused to respond to the urgent necessities of these insane poor, for surely no affliction appeals more strongly to our sympathy and generosity than this fearful malady.

The improvements deemed most essential, are a building whose relative dimensions to the number of patients, are such that each inmate will be supplied with enough of atmospheric air to support health, and the building so constructed as to admit of their proper classification. Indeed the importance of having enough of pure air to breathe, and the necessity of having the quiet, the timid and the convalescent separated from the noisy and turbulent, so as not to be affected by their screams and vociferations, are so palpable, that they need only to be mentioned to be properly appreciated.

I also wish to mention that there is much credit due the alms house superintendent and the attendants of this institution for the cleanliness of the different apartments of this building. When we take into consideration the great disadvantage of having to keep the turbulent, the destructive and the filthy in the same apartments with the other inmates, this Insane Asylum, in point of cleanliness, will compare advantageously with the best in the State. As far as the patients themselves are concerned, although somewhat ragged, each rag is kept clean.

In this case the physician, no matter how diligent and attentive, or how well he understands the subject, is nearly or quite powerless. He can order no healthful exercise nor any system of profitable amusement. He can only prescribe for the absolutely sick. The keeper has done his duty when he turns the key and locked the unhappy inmates fast, or gone in and by intimidation, threats or blows quieted some turbulent demented incurable. The superintendent of the alms house has done his duty when he has provided for their daily living, at the cheapest possible rate, and supplied the wants that keep them from perishing more rapidly, or from a more speedy recovery. The alms house committee look at the figures and the quarterly expenses of the Institution, and if they have not exceeded the preceding quarter, they have done their duty, or passing speedily through the hall of the Institution they see the inmates neat and clean and do not stop to think that crazy people need anything more —or if one more benevolent, humane and thoughtful than the rest suggests an improvement, it fails to meet anything more than the discouragement of the board, and nothing is the result. The board of common council still leave all to the committee, and the people leave all to the common council. The police justice is obliged nearly every week to relieve the jail of a lunatic; he must be disposed of; the superintendent of the alms house has no discretion, he must re-

ceive him, and another deranged person is thrust in the overcrowded apartments and left to his own gloomy hopeless condition to become a confirmed lunatic. The humane and philanthropic learn these facts and lament them, but can do nothing. The time has come when calm judicious legislation is demanded, to interpose and prevent these alarming evils.

ALLEGANY COUNTY.

Of the poor house and its insane inmates in the county of Allegany, Dr. John Norton remarks: "The old block house in which some insane are confined, occupied in part by idiots, is in very bad condition, with no ventilation, old, rotten and filthy, and entirely inadequate for the purposes for which it is used. All the buildings are poorly arranged and badly constructed. Most of the inmates are idiotic, and few are even competent to care for others. With so little help, spite the efforts of the keeper, many must be at times neglected. I found much suffering for want of medical care, as the surgeon employed so seldom visits the institution, and I learned, by those who were competent to speak for themselves, that he gives each case very little attention. I do not think the aged and sick receive proper nourishment. There is but one back yard in which to amuse themselves and get open air, which is entirely insufficient for the variety of cases there represented." These remarks are based on the facts that the poor house has in it eighty-nine paupers, twenty-one of whom are lunatics or idiots. They have been admitted to the poor house at various periods since 1842. Fifteen are females; six are males; fifteen are natives and sixteen of foreign birth. Eight cases are mild; one has been in State prison; three have been treated in the State asylum; seven are capable of doing some labor. Those who cannot labor have no form of amusement. The house has no bathing tub, and in dry weather the supply of water is insufficient. Thorough ablution is not one of the virtues of the institution. There is no arrangement for uniformity of heat in winter and ventilation. None are without the privilege of coming to the open air *every day, unless the keeper is absent.* There are rooms without a window opening out of doors. All the rooms have bedsteads; one and two sleep in a bed. The beds are ticks filled with straw, which is changed about once a month. There are large stoves in the hall, which are considered sufficient to heat the cells, but no attention is paid to its uniformity or sufficiency. The sexes are partly separated. The keeper has charge of the female insane, and pauper care is the only kind bestowed, beside that of the keeper on the males. As to cleanliness, "some of the cells are quite bad," and the atmosphere in them "very bad." Vermin were found in some of the beds. The

insane are only partially separated from other paupers. Eight were removed during the year by their friends. A county physician averages a visit to the lunatics about once a month.

BROOME COUNTY.

In the Broome county poor house there are eighty-five inmates, twenty-one of whom, or one in four are lunatics. Ten are males, and eleven are females. Only four are of foreign birth. One has been in confinement since 1834. Nine of these cases are mild, seven are violent. Seven have been treated in an asylum. Eight of these insane are capable of labor. Four males and two females are destructive to their clothing, and four males and one female are in constant restraint, by hand-cuffs or otherwise. The other forms of restraint are persuasion and confinement. *Whipping is seldom resorted to.* The house has a full supply of water, but no bath tub. All but three are required to wash hands and face daily. Three are confined in cells above ground, without the privilege of coming daily to the open air. There are wood bedsteads in all the rooms but one. Six sleep on straw without beds or bedsteads; the straw is changed once a week. Part are fed in cells, others at a common table. The building is heated by a coal and wood stove. All the rooms are heated, without observation by a thermometer; it is intended to keep them all comfortable. The sexes are entirely separated at night. None other than paupers are employed uniformly to administer to the daily wants of the insane. The cleanliness of the rooms is commendable, though they are badly ventilated. Vermin were observed. Recent cases are received; one had neither shoes or stockings during the winter, because he would not wear them. The institution is designed to accommodate only five lunatics. They receive medical attendance only when sick. Each case does not receive care with reference to its ultimate recovery. The buildings of the Broome county poor house are insufficient to meet the wants of the insane, but such as they are, are kept in good order, and the keeper and his family are attentive and humane.

CATTARAUGUS COUNTY.

Cattaraugus county house has forty-nine inmates, seventeen of whom are insane. The lunatics have been admitted at several periods since 1838. Thirteen are of American birth. Thirteen are likewise mild cases; seven are of filthy habits. None have ever been treated in an asylum. Two cases were admitted in 1864, previous to August 12th. Five males and six females are capable of doing some labor. The others have no form of occupation. The violent are restrained by locking them up in a dark room. The house has no bathing tub.

Some of the bedsteads are of iron and a part are fastened to the floor. In some of the beds two persons sleep. Straw is used for bedding and is changed as *often as it becomes foul.* The food is distributed in dishes to each one. No attention is given to free ventilation, nor to uniformity of heat in the winter. When indoors the sexes are kept separately; the keeper and his wife having a general superintendence over them. They have clean clothing once a week and oftener if necessary. One had no shoes during the winter. The building is designed to confine twenty lunatics, but nineteen is the highest in confinement at any one time. The insane are visited by a physician every week, and oftener if they are ill, but circumstances do not allow of any treatment with reference to recovery. They are as clean and comfortable as the system of management is calculated to make them.

CAYUGA COUNTY.

In the poor house of Cayuga county, situated in the outskirt of Auburn, there are seventy-five paupers, twenty-nine of whom are insane. Thirteen are males, sixteen are females. Eight are natives, seventeen are foreigners, and four unknown. They have been admitted at various periods since 1845. Eleven of these cases are mild, fifteen are violent, sixteen are of filthy habits. Nine of these cases have received treatment at the State asylum at Utica.

Ten are capable of performing labor, the others have no amusement or occupation provided for them; twelve are destructive to their clothing and require occasional restraint; the leather muff and confinement in cells being the form used. The house is supplied with water by a well and cistern, but it has no bath tub, nor have the insane any special time for bathing except when filthy. There is a standing rule requiring the hands and face of the insane to be washed daily. [Is it thoroughly enforced?]

The building is of brick, three stories with basement of nine feet, other stories twelve feet, with rooms 8x12. There is a bedstead in each room; sometimes two sleep on one bed, but generally only one. The bedding in ticks is of straw and changed as occasion requires, not regularly. The diet is ample in variety and substance. The building is heated by furnaces, and designed to be made comfortable. The mild and inoffensive have the range of the basement and yards together, but the violent are confined in cells. Several mild cases occupy a room together, but the violent are kept in separate cells. They have only such care as can be forced from pauper attendants. The keeper said that vermin were sometimes found on the persons of lunatics. It is designed on the part of the county to send recent cases to the State asylum. The building is designed to

accommodate thirty persons. Dr. Sylvester Willard, of Auburn, who made the investigation, remarks: "All the males are kept in the basement which is above ground, where they eat and sleep, and when not in the yard spend their time in the large hall together, with the exception of the four who labor on the farm. Some cells are especially strong with iron grated doors, for the safe keeping of the violent and destructive. These strong cells being in proximity to the halls may be kept in comfortable temperature in cold weather, *but are very deficient in ventilation.* They have no windows or other openings and no communication with outer atmosphere, except from the hall through the grated door. At the time of my examination two cells were occupied, with one violent and destructive lunatic in each. Their beds were torn into shreds, and contents scattered over the floor. They were filthy in a superlative degree, and their excrements spread over the floor, on the walls and over their persons; with no means for ventilation or change of air the stench at their cell door was excessively offensive. Under the circumstances it may have been difficult to have had it otherwise. It is due to the keeper to say, that with the exceptions of these cells, the rooms were clean and neat.

The medical treatment is by a homœopathic physician, who visits the house regularly once a week, and oftener if required. No medical treatment is made with reference to their ultimate recovery."

CHAUTAUQUA COUNTY.

Chautauqua county poor house has one hundred and twenty inmates twenty seven of which are insane. They have been admitted at various periods since 1848. Two of these cases have been treated in an asylum. Sixteen of the cases are mild, two are violent, and five are filthy. Ten are confined to the house. Four males and five females are capable of doing some labor. No amusement is provided for any who do not labor. In dry weather the supply of water is insufficient and is brought about a half a mile by teams.

The insane are kept in two buildings; one building is of brick, and the bedsteads in the rooms of this building are of iron, and fastened to the floor. Only one sleeps in a bed, except in one bed, which is occupied by two persons. One sleeps on straw without any bed. The beds are filled with straw, except such as are occupied by the sick, which are of cotton or feathers. The mild cases are kept in one building, and the excitable or violent in another. A man and his wife are jointly employed in the care of the violent cases. The rooms are all heated by a box stove, with wood, from the lower floor, the pipes encased passing through the floor above, it is believed by the overseer that no inmates suffer with cold in the winter.

Paupers are employed to take care of the mild cases. The rooms are clean and the atmosphere in them is not bad. All are furnished with shoes in the winter, only one would not wear them. The building is designed to accommodate twenty-two, but thirty have at times been confined there. There is no regular medical attendance, nor is ultimate recovery held in view. The duties of the keeper appear to be discharged in a kind manner, and as well as could be done by any one not experienced in the management of the insane. Dr. Barrett observes and justly, "The attendants ought not to be all paupers." The deficiency in water must be a great drawback to the comfort of the inmates, and the question might properly be raised whether the system of heating is sufficient to warm the building in winter.

CHEMUNG COUNTY.

The poor house in the county of Chemung contains forty-eight paupers, eight of whom are insane; just one-sixth of the whole number. Four are males and four are females; all are native born. Two males and one female are capable of doing some out of door labor. Those who cannot work are furnished with neither employment or amusement. They are all represented as being destructive and tear off their clothing; but they require no restraint other than confinement to their rooms. The building is supplied with water from springs at the distance of ten rods off. It has no bath tub or other convenience for bathing, and no special attention is paid to either cleanliness, ventilation, or the uniformity of heat in winter. The building is of wood, two stories high; the height of ceiling being eight feet, and the rooms 8x10. The food for the insane is the same as that for the other inmates of the institution, and served to them by the sane paupers. The lunatics are all confined in one ward, without other than pauper attendants, and without any accommodation for the various grades of their disease. No attention is paid to their ultimate recovery, and a physician only visits them when he is sent for. None of them have shoes, because it is "impossible to keep them on." As to cleanliness and ventilation, the rooms are bad. Dr. Morse, who made the investigation, adds: "The condition of the insane paupers in Chemung county is deplorable in the extreme; and there is no adequate provision made to remedy the evil."

CHENANGO COUNTY.

There are seventy paupers in the Chenango county house. Twenty are insane. Ten are males and ten are females. They have been admitted since 1840. Fifteen of the cases are mild; about one-third have received treatment at Utica. Eight are capable of some labor.

Some effort is made to amuse those who do not labor. Three are destructive to their clothing, one requires constant restraint. The leather muff is used for such purpose. The institution has two bathing tubs in the department for the sane poor, with a full supply of water. It is designed that all shall wash every day, hands and face; but the violent do not always. The building is apart from the one used for sane paupers, is a fine building, has sixteen rooms; ten of them are provided with beds; four cells are provided with bunks fastened to the wall and floor; one and two sleep in each bed; the straw in the beds is changed each month, or every year, according to its use. All the inmates go to a common table. The building is heated with stoves, which through ventilators from the halls, warm the rooms occupied. There are no accommodations for the various grades of the insane. A man and a woman are employed by the year to take care of the lunatics. The rooms appear clean, and the air good as can reasonably be expected. The institution receives recent cases, and will accommodate from twenty to thirty, though never more than twenty have been confined at any one time. Two were removed by friends during the year, and one was transferred to the sane department. The lunatics have no regular medical attendance nor care with reference to ultimate recovery.

CLINTON COUNTY.

No report.

COLUMBIA COUNTY.

It is a sad spectacle to humanity, that which is revealed in the condition of the insane paupers of Columbia county. There are at the poor house one hundred and twenty-seven inmates, twenty-seven of whom are lunatics. They have been admitted to the poor house at various periods since 1840. Sixteen are males and eleven are females. Twenty-one cases are mild in character. TWENTY-SIX are noted as filthy! Only two have ever been treated in an asylum. Eight males and three females are capable of doing some labor. Others have no amusement provided for them. Five require occasional restraint. There is an inadequate supply of water; there is no bath tub; the lunatics are not required to wash hands and face daily. Cleanliness, ventilation and uniformity of heat in winter are not observed to any particular degree. The rooms have not bedsteads in all of them. *Twelve* sleep on straw without bedsteads. The straw is changed once or twice a week. The building is heated by coal "poorly applied." Mild cases are put with the sane paupers. There are no accommodations for the various grades of the insane. One assistant keeper is aided by the sane paupers in the care of lunatics.

The atmosphere in the rooms was very impure and unhealthy. The county takes recent cases. Several were admitted in 1863 and 1864. The females have a change of under garments every week; *the males none.* None had had stockings during the winter; all had shoes. There is no convenience for out of door exercise. No provision is made for medical treatment; they do not receive any medical attendance at all, nor care of any sort with reference to ultimate recovery. Confirmed lunacy and hopeless idiocy is the fate that threatens the unfortunate who passes this threshold.

CORTLAND COUNTY.

The provision for the care of the insane poor in the county of Cortland is shockingly bad. Of eighty-eight paupers thirty-one are insane; being more than one-third the whole number. Eighteen are males and thirteen are females. About twenty-four of this number are of American birth. Not a single case has ever been treated in an asylum, although several have been admitted for fifteen or twenty years; fifteen cases are mild, nine are violent, and twelve are excitable. Eleven are filthy, several are not only insane but have become idiotic. None of the males perform any amount of labor, six females perform some indoor labor. There is no system of amusement or light occupation to divert the mind of any. Ten are destructive, nine require occasional restraint; the violent are controlled by close cells and straight-jackets. The house has not a full supply of water. The insane are not all required to wash hands and face daily! The arrangement for cleanliness and ventilation is imperfect; several are confined in cells without the privilege of coming daily to the open air!! The building is a story and a-half wood structure, ill adapted to the purpose for which it is used; the ceilings are low, the bedsteads are wood, and usually two sleep in one bed; in one bed three sleep; in some instances a sane and an insane sleep together. Such as are able, come to a common table, the others have food carried to them; the diet is such as a farmer's table affords, plain but ample. The rooms are heated in winter with wood and coal stoves, with stove pipes running through the rooms, without attention to uniformity of heat. There is no accommodation for the various grades of insane; but the violent cases are kept in cells in a building off from the main building. In one ward ten are constantly confined. The sexes are not kept entirely separated, and male attendants are employed to care for female insane. The atmosphere in the rooms is generally unwholesome. At this institution recent cases are received! Two cases were received in 1864. Ultimate recovery by management or treatment is not held in view. Dr. H. O. Jewett, who

visited this house says, "the edifice is a badly constructed affair. It was originally a farm house, additions having been made to it; the cells are seventeen in number, $5\frac{1}{2}$x$6\frac{1}{2}$ feet, ten feet ceiling in front, the wall above being finished upon the rafters; there is one window of eight lights to each cell. There are really no means except accidental ones, for ventilating the various rooms; and with the present arrangement of the house uniform or appropriate warmth in winter season is out of the question; neither is there sufficient help employed in the establishment to ensure anything like proper cleanliness of the apartments or persons of the inmates. *The common claims of humanity would seem to demand some regulations which will secure more attention to the physical comfort and moral training of each individual, and the special medical treatment of the insane.*" What language can be more explicit or more earnest? Is it any wonder that in such want of care the insane become idiotic or demented, and the mild cases incurable?

DELAWARE COUNTY.

To describe the building of Delaware county in which the insane are kept, will in some degree show the misery to which those unfortunates are unnecessarily subjected. It is a wood building two stories high, with rooms or cells 4x8 feet, lighted and ventilated only by a diamond hole in the door. Dr. Telford, of Delaware, says, "The windows in the outside are of fifteen lights, 7x9 inches glass. A hall runs on each side of the building, and in the middle is located the cells (after the style of a prison,) which are 4x8 feet square, made of rough material, the doors are made of rough hard-wood plank, three inches thick, with a diamond hole in them 7x9 inches, *which is the only source of light and air!* Beds are on the floor, with nothing to separate them from where they sit except a piece of plank set up edgewise, and indeed the whole construction is a stigma on humanity."

In apartments thus dark, and cold in winter, and filthy at all times, more gloomy than prisons, twenty-six insane human beings are kept. Ten are males and sixteen are females—and eighteen are American born. Two of them have been so confined from 1842 and 1844—and this Institution continues to receive recent cases! What can be more cruel? And only paupers extend these lunatics the care they receive! There are in all fourteen cells, in which twenty-six lunatics are confined. Four escaped during the year who were not returned; and who would not escape even to die rather than live such a lingering death? There is no provision made for the medical treatment of the insane, and they receive none with reference to a recovery. The sufferings of these unfortunates from whom the air and light of heaven is shut out, would form a dark chapter of human misery could it be written.

DUTCHESS COUNTY.

The poor house of Dutchess county with a population of one hundred, contains twenty-four lunatics, or about one fourth of the whole number; eight of whom are males and sixteen females. Thirteen are supposed to be native, and eleven of foreign birth. Nothing definite can be obtained relative to the date of their admission, there being no special record or care for such particulars. Six of the number have been at some time under treatment at Utica. Eleven of the cases are mild, eight violent, and two filthy. Three of the males are capable of labor, and five of the females. The remainder have no occupation amusement or employment. Six are destructive and tear off their clothing, two require constant restraint, either with the straight jacket or with straps for the wrists and belt.

The house has a full supply of water, but no bathing tubs, most of them however, wash hands and face daily. The building is heated by stoves and ventilation is only by the windows, it being of wood two stories high, with seven feet ceilings. The rooms are severally 6x6, and 8x6 feet. Two sleep in basements with other sane inmates. Iron bedsteads fastened to the floor are used, on each of which only one sleeps. The beds of straw are changed "as often as seems necessary." The diet is for breakfast, bread, hash of meat and potatoes, coffee; dinner, bread, fresh or salt meat, fish, and for tea, beans and potatoes, and water. Mild patients go to the table with the sane inmates, and others receive the food in their cells.

There are no accommodations for the various grades of the insane, four are confined in some of the cells. A man and his wife care for the female insane, no other than paupers are employed in the care of lunatics. This institution assumes to take charge of recent cases! The lunatics are visited by a physician the same as the other insane paupers, whenever they are known to be sick. There is no attention paid even to recent cases with a view to their recovery. Two were without either shoes or stockings during the winter.

Dr. E. H. Parker, who collected these facts, observes: "It is impossible to ascertain anything concerning them (the pauper lunatics) more definite than is here given viz: that they are fed, clothed and kept tolerably decent. No thought is given to curing them. In fact it is no place for one to attempt to do so, a proper insane asylum is required to effect anything in that way with constant medical attendance. The city of Poughkeepsie and the rest of the county, are about to divide the paupers, insane and others between them, and for this purpose a new building has been erected in the town of Washington. This does not seem to have been very wisely arranged but attached to it is a building 22x34 feet, intended for the insane.

It is to contain 18 cells in its two stories (9 in each,) will have a walk (or hall) between the rooms of cells of about four feet, has large windows to be protected I understand by oak bars, and is altogether so far as I can learn, about as unfit a place for the insane, as could be arranged. It involves their continual confinement in small cells, unless they are very mild, it does not admit of a proper separation of the sexes, or of the violent from the mild, or of proper provision for out of door exercise for either. It is about 20 feet from the main building, and is to be heated by the same steam apparatus that warms that. It is incredible that the authorities whoever they are that have had charge of this building, should have consulted any one familiar with the care of the insane, in arranging its plan. Necessity will undoubtedly compel them to build anew or to modify this. I should add that although I have repeatedly visited the county house, I have not had the good fortune at any time to find the superintendent at home, and am indebted for all my information to his assistant." What language can more explicitly point out an evil, at which common humanity must blush with shame?

ERIE COUNTY.

The population of the Erie county poor house averages about five hundred. Of this number one hundred and twenty-one are lunatics. At least three-quarters of them are females. Of one hundred and three, eighty-six are of foreign birth. They have all been admitted since 1850. Fifty-five cases are of mild type. Only two cases are noted as having been treated in an asylum. About twenty-four are capable of labor. Sixteen require occasional restraint and two constant restraint. The straight jacket and a restraining chair are used for this purpose. The house has not a full supply of water. It has no bath tub. All the rooms have not beds and bedsteads. About twenty sleep on straw, without other bedding. The straw is changed once in one or two weeks. The building is heated by stoves for coal or wood. There are no accommodations for the various grades of the insane. The sexes are separated, but paupers only are employed to care for the insane, and to attend to their daily wants. The rooms are generally clean, and the air very good, except in the rooms occupied by the worst cases. The county takes recent cases. Nineteen cases were admitted in 1864. About twenty had no shoes or stockings during the winter. The county house is only designed to accommodate eighty cases, but at times one hundred and fourteen have been forced into it. The very mild cases are put in with the sane paupers. Ten or twelve were removed by their friends during the year, and two escaped who were not returned. The physician

appointed by the superintendent of the poor house visits the insane twice a week. Temporary cases are admitted for ten days, of which no account is here taken.

"The largest building for the insane especially, is of stone, 118x40 feet, two stories high, and has fifty-two cells, with two wards, one for male and one for female patients. The second building is also of stone, 40x40, with eighteen cells. The third building is wood, 26x 50, with fifteen cells. The accommodations are limited, for so large a number, but everything looked neat and comfortable. The accommodations are not suited to the favorable care and treatment of the insane. Their construction is not such as is approved by medical and sanitary authorities, and it is impossible to separate patients into proper classes. The air in the rooms occupied by those designated as the worst patients, is unfit to breathe. The supervisors of Erie county, at their last session, appropriated $20,000 for the purpose of erecting another building for the insane, adjacent to those now built. but the four buildings will be detached, and at the best, illy adapted to the proper treatment of the insane. In fact, the State of New York should maintain, at this place, a charity like the Utica Asylum. as it would confer a great benefit upon society. I assume the responsibility of urging some action in behalf of the insane of Western New York, commensurate with the importance of the subject, the interests of humanity, and the dignity of the State." These earnest remarks are from Dr. Josiah Barnes, of Buffalo, who made the investigation in Erie county.

THE PROVIDENCE ASYLUM.

"This institution at Buffalo, built expressly for the insane by the Roman Catholics, is under the management of the Sisters of Charity. The rooms are spacious and well ventilated. At each end of the building, in each story, is a balcony supported by pillars and a balustrade, so that the insane can enjoy the fresh air, without descending to the ground. The property embraces several acres, and is well adapted for the purpose for which it is designed; and the Sisters, to whose management every thing is entrusted, are indefatigable in their efforts to render as comfortable as possible the unfortunate persons committed to their charge." This institution has twenty-five inmates. It has a free supply of water, and three bathing tubs. The insane have amusements provided for them, and every possible care, with reference to their ultimate recovery, and nothing seems lacking that could promote the comfort and happiness of each patient. Two have died here during the year, and several cases have left, having convalesced.

ESSEX COUNTY.

The population of the Essex county house is ninety-three. Nine of whom are insane, the ratio being one in ten. The oldest case was admitted in 1830, and is both blind and idiotic, another case was admitted previous to 1850. Three are males and six are females, four are capable of doing some labor. Only one has been treated in an asylum. Four are filthy in their habits. Those who do not work have no mode of pastime provided for them. The method of restraint used is the straight jacket, and *tying* the hands behind the back. The house has a full supply of water, but no bathing tubs, nor is there any particular arrangement for uniformity of heat or ventilation. The building which is of wood, two stories high, has two rooms without windows opening out of doors. The arrangement for sleeping seems to be comfortable, and the straw is frequently changed. The diet is represented as ample, the mild eat at a common table, while the more violent and raving have their food served in their cells. The attendants are the keeper and his family. The rooms are clean and nicely kept. One insane lives with her mother near the county house. There are but six cells, and each cell is designed to accommodate but one person, but some are so mild that they sleep with the sane paupers. Recent cases are received! They receive the attendance of a physician whenever they are sick.

FRANKLIN COUNTY.

It is a circumstance most fortunate that there are only five insane persons confined in the county poor house of Franklin county, for the record of its condition is shocking to humanity. The whole number of inmates is forty. Two of the lunatics are capable of some labor. One is restrained constantly in a cell, without the privilege of coming daily to the open air. There is a spring of water near by, from which the building is supplied, but the insane are not required to bathe, or even to wash their hands and face, except when they see fit to do it themselves. There is no provision for ventilation, or uniform heat in winter. "Have you bedsteads in all the rooms?" answer, "In two only." Two or three sleep on straw, without other bedding; the straw is changed once a month. Of course there can be no provision for the various grades of insane. In the day time the sexes mix as they please, and receive their only care from the sane paupers. The rooms were "not cleanly," and the atmosphere was "bad enough," and the keeper said that vermin were "somewhat plentiful." They have no changes of undergarments. One escaped during the year, who has not returned. They have no medical treatment, and are not visited by a physician. Only one case has been

treated in an asylum. Dr. Sidney P. Bates says: "I believe the great object had in view by the people of this county, in the maintenance of the poor, is economy." The particular kind of economy is indicated by this report. The poor house buildings are all old, the roof leaky, the floors uneven, by reason of the settling of the foundation walls. The buildings are woundrously unfit for the purposes for which they are used.

FULTON COUNTY.

One-seventh of the inmates of the Fulton County poor house are lunatics, there being ten of this class, viz. three males and seven females. The whole number of inmates is seventy. Eight are native, and two of foreign birth. All have been admitted since 1857, and six of them have been treated in an asylum. Three males and five females are capable of doing some labor, but at such times as they do not labor, they have no employment or amusement whatever. Six of the number are destructive to their clothing, and three require occasional restraint. The modes of restraint are by handcuffs and confinement, and the exercise of kindness. The house has a supply of water, but no bathing tub. The insane are required to wash hands and face daily. There is no arrangement for ventilation, or the uniformity of heat in the winter. "Are any confined in basement cells?" "Yes." The building is of brick, two stories high, with ceilings of nine feet, the rooms 18x50, with windows 4x2½ feet. All the rooms have bedsteads in them; the bedding is of straw, and none sleep on straw only. The diet provided is simple, but nutritious, and all come to the table and receive their food on plates. The sexes are kept separated, but they have no other than pauper attendants. They receive no care with reference to their ultimate recovery the physician visiting the institution only when he is sent for. The location of the poor house is pleasant and healthful, but in its construction it was never designed for the care of the insane. The county does not hesitate to take care of recent cases, even with such barrenness of means for their care.

GENESEE COUNTY.

The building in which the insane poor of Genesee county are kept is of stone, two stories high, with ceilings of eight feet. The rooms are 8x10, with windows 2½x4½. It has a supply of water and two bath tubs, and is heated by a furnace in the basement. The number of insane during the year was thirty-five, but only thirty-two were in confinement at the present time. Nine of the number were able to do labor. Six of the males do out of door work. The others were severally amused in singing, reading, playing pennies, swinging, &c.

Twenty were destructive to their clothing, and eleven required occasional restraint by the use of straight jackets. They are all required to bathe twice a week, and to wash hands and face daily. The institution has iron bedsteads fastened to the floor. Only one sleeps on straw without proper bedding. The food, which appears sufficient, is carried to each by an attendant on plates. There is an effort to separate the violent from the mild cases. The sexes are separated, and a person (not a pauper) is employed in their care. The rooms are clean, and the ventilation said to be good. The county receives recent cases. Fourteen cases were admitted in 1863, and seven up to August, 1864. The building is designed to accommodate thirty-five patients. One escaped during the year who was not returned, and six were removed by their friends. Fifteen of the cases were filthy in habit, and nearly all the cases are excitable. Attention is directed to the ultimate cure of each case.

GREENE COUNTY.

There were nineteen insane in the poor house of Greene county. One was admitted in 1824, one in 1840, two in 1842, two in 1844, others were admitted at various periods since. Six were males and eleven females; sixteen were of native birth; sixteen were mild cases; twelve were of filthy habits; seven destructive, and six were confined to the house; four had been treated in an asylum; one was a cripple, and one a deaf mute. [The blank for further information was not returned, and doubtless there was an omission to send it to the county judge for distribution.]

The report of the committee on charitable institutions in 1857, reported as follows: "Six are confined in cells; five of them are in chains, including two women. They are restrained by confinement, and by wearing chains about their legs and arms. Some are chained to the wall. While visiting the house, the committee observed two men and one woman taken from their cells to the yard for air. There they were all chained to the fence, within a few feet of each other. Those confined in cells are without air, except from a small hole in the door. They are in a wretched state. None are cured or improved, a result certainly to be expected from their present treatment." It is to be hoped that the condition of the institution and the care bestowed upon the unfortunate lunatics has improved since 1857.

HAMILTON COUNTY.

No report.

HERKIMER COUNTY.

In the county pror house for Herkimer county there are one hundred and forty-eight paupers, thirty-one of whom are insane. Seven-

teen are males and fourteen are females. Fourteen of this number are mild cases of insanity; nine are violent, and eleven are confined to the house; eleven are of filthy habits; thirteen have been treated in the State asylum. Most of the cases have been admitted since 1850; but one case has been in the institution since 1844. One female is capable of labor, and three males of out door labor. The others have nothing to do in the way of amusement or pleasure. Handcuffs and straight jackets are used for restraint. The yard of the building has water in it, and tubs. The only ventilation is secured by lowering the windows. One inmate is confined in the basement cell, with the privilege of coming to the open *air, once in three days!*

The buildings used are one story, one being of wood and one of stone, the ceilings being 8 and 10 feet respectively, and the rooms severally 8x5 and 8x6.

The bedsteads are of wood. The ticks are filled with straw, which is changed twice each week. Three sleep on straw alone, without bedsteads or bedding. The breakfast is bread and barley coffee; dinner, meat, potatoes and bread; bread and milk for tea. Each mess is taken to the room for the women. Most of the men eat at a long table in the hall. The house is heated with wood and coal stoves, but no attention is paid to uniformity of heat in the winter, though the stoves are kept constantly burning. The mild cases associate with the sane and sleep with them. There are no accommodations for the various grades, and to the *wisdom* of paupers is committed the care of the violent.

The full number that the institution can accommodate is twenty-four. The surplus number are kept with the sane. One escaped during the year who has not returned. A physician visits the institution twice weekly, or oftener, if sent for, but the care is merely temporary. The whole arrangement of the institution is bad, and there is nothing about it calculated to improve the condition of the insane; nothing sufficient to make them comfortable.

JEFFERSON COUNTY.

The poor house of Jefferson county has a population of one hundred and seventy-four; sixty-one of whom are lunatics. Twenty-two are males, and thirty-two are females, who have been admitted at various dates within the last twenty years; the records do not show the period at which many were admitted. Five were admitted in 1864. Thirty-seven are mild cases. *Only four* of these have been treated in an asylum. Of the sixty-one, six males and sixteen females are capable of labor. All the males working out of doors. There is inclosed an acre of ground on which to exercise, and a swing is

erected for amusement. [To what extent are these useful in the winter and stormy days, and what indoor amusements are furnished?] Eight are destructive to their clothing, and seventeen require occasional restraint by straight jacket, or handcuffs; confinement in cells and a bath are occasionally resorted to, to enforce restraint. The house has a very scant supply of water. It has one bath tub, and the insane are required to bathe once a week and to wash hands and face daily. It is very rarely that any are confined in cells without the privilege of coming daily to the open air. There are bedsteads of wood in all the rooms except the basement. Q. "What is the greatest number who sleep in one bed?" A. "Three to five idiots at times in a large bunk." Straw is used for bedding, which for the idiots is changed weekly, for others less often. The building is heated by furnace and stoves, and a comfortable temperature is maintained.

There is no efficient accommodations for the various grades of the insane. The sexes are not entirely separated. Aside from the keeper and the assistant keeper of the poor house, there are none but paupers employed in the immediate care of the lunatics. Q. Did you look for vermin on their persons? A. Now and then there are lice. The county receives in its charge recent cases. Five were without either shoes or stockings last winter. Fifty of the lunatics are sepated from the paupers and are in the asylum building; eleven are in common with the paupers. Eleven were removed by their friends, between November 1, 1863, and November 1, 1864. Three died during the year, and sixteen were discharged. An attending physician, at a salary of $150, visits the institution twice a week by requisition, and oftener if required. Cases receive care with reference to recovery if not thought incurable.

The county house consists of two separate buildings—"the old poor house," and "the new asylum." Most of the insane are in the asylum. This in the main is well planned and constructed for its purpose, and is well ventilated. The poor house part is very badly ventilated. Both are deficient in a supply of water and conveniences for bathing. The grounds attached are sufficiently large. The main rooms of the asylum are of good size, well lighted and very cheerful. The bedrooms are separated from the main body of the rooms by upright bars, of about 3x4 inches (transverse section,) leaving some four inches in space between each two bars. [A sort of cage.] * * There are thirty-eight bed rooms in the asylum and they are generally without fault.

LEWIS COUNTY.

There are only forty-one paupers in the Lewis county poor house. Eleven are insane, three males and eight females. It is creditable to the authorities that six of this number have received treatment in an asylum. The oldest resident is a female who was admitted in 1829—thirty-five years ago. She has never received treatment in the State asylum, as hers was a chronic case long before that institution came into existence. Five of the number are able to labor; three are destructive; and three require occasional restraint with leather muffs. The house has a full supply of water, though no bathing tubs.

The building is of brick, two stories high and basement. The rooms are located in the middle of the floors with halls on the outside, (after the style of cells in a prison,) and the windows open into the halls, (so that the rooms or cells receive light, if at all, through the doors opening into the halls,) and the bedsteads are fastened to the walls. For bedding straw is used, which is changed as often as necessary, for some, every two or three days. Those who are able, go to the table, and others receive their meals in tin dishes. The building is heated with a furnace. The sexes are not kept entirely separated; male attendants are occasionally employed to care for female lunatics, and pauper help to the keeper of the house is the care they receive. This institution is designed to accommodate sixteen. No case receives care with reference to its ultimate recovery.

LIVINGSTON COUNTY.

There are in the county poor house of Livingston one hundred and fifteen paupers, of whom fourteen are lunatics. Six are males and eight females; eight are of native birth. They have been admitted at various intervals, since 1848. Eight of the cases are mild, and several are violent only by paroxysms. Five have been treated at the State asylum. Five males and four females are capable of labor The amusement for the others is reading, and walking in the yard and grounds. Two require occasional restraint, either by straight jacket or by being shut in cell. The house has water, but no bath tub. The insane are required to wash every week, and hands and face daily. Each room and cell has a window opening out of doors. The building is heated by large coal stoves. All the rooms are warmed. The building is superior to most of those in the rural districts. Dr. D. H. Bissell says: "The treatment of the insane in our county house is all that can be desired for the insane confined there. They are mostly old and confirmed cases, not benefitted by medical treatment. They are generally mild in their behavior, with two or

three exceptions, and they are only occasionally violent." The inmates are fed, comfortably clothed, and well warmed in winter. The sexes are kept separated, and their care is not committed to paupers The rooms are scrubbed every week, and the air in them is as good as can be expected where so many are congregated. They have clean under garments every week. The county *does not* receive recent cases, but supports them at the asylum at Utica. It has ten cases there at this date. All had shoes and stockings during the winter. The building was designed to accommodate twenty, but twenty-four have been confined there at one time. Two escaped within the year who were not returned. Those who are kept at the county house, are considered *incurables* and receive no treatment.

MADISON COUNTY.

The statistics from Madison county reveal a most deplorable condition of the insane poor. It is shocking, it is shameful.

The poor house contains ninety-four paupers, twenty-five of whom are insane. They are, with three exceptions, of American birth. The records of the institution do not show the dates of their admission. Inspection shows that fifteen of this number are filthy in their habits, and that only five have ever been treated in an asylum. Nine are capable of doing some labor. The remainder have nothing to do; fourteen are destructive to their clothing. The house has no bathing tub, the insane are not even required to bathe at all, and the violent insane not even to wash their hands and face. It is idle to describe the building, it is heart-sickening to describe what is in it. Eighteen sleep on straw, without bed or bedding; the straw is changed once a week. The food is distributed in tin dishes. No uniformity of heat in winter seems to be aimed at. The mild cases have their liberty during the day. Not so the violent. The only care they receive is from the hands of incompetent paupers. Those confined in the cells are extremely filthy, most of them not using vessels, and their excrements are mixed with the straw on which they lie. Their straw is changed only once in a week; and these lunatics, with their "bodies besmeared with their own excrements, not allowed to come daily to the open air, eating in the same filthy apartments, are not washed from one year's end to another." The cells in which they are confined are only 4x6 feet, with a ceiling of 7 feet, and open into a hall, so that they can have no ventilation. "A bad stench" issues from them; and in this stench the lunatics are forced to live—live a life more terrible than a hundred deaths. *Three males were in a state of nudity;* the females wore only chemises; but the mild cases are clothed like other paupers. Fourteen had neither shoes nor stockings during the winter!!

This vile prison is designed to make confirmed maniacs of twenty-five persons; that is, it pretends to have accommodations for twenty-five, and their treatment would only serve to make them incurable. The books do not show what is the greatest number confined there at any one time. They are not visited by a physician, and receive no care with reference to their ultimate recovery.

Cannot the voice of humanity be awakened? Shall not legislative authority be exercised for their relief?

MONROE COUNTY ASYLUM.

The Monroe County Insane asylum is, by a special act of the Legislature, made a separate and distinct institution from that of the poor house, and is under the control of the board of supervisors of the county. It is a three story brick building, the basement being 10 feet ceiling, and the other two stories 12 feet each. The single rooms are 5x10 feet, and the double rooms 8x10 feet. The windows are 2x7 feet. There are four rooms without windows opening out of doors. The building is heated by stoves; and in winter the temperature is maintained uniform by the indication of a thermometer. The lunatics are confined in four separate wards; four occupy the same room. The whole number confined during the year is 105; but the number has been reduced by patients discharged, deaths and absconding, so that only 74 have been in confinement at any one time: 46 were males, 59 females; 38 American, 67 of foreign birth; 54 were mild, and 18 were filthy; 27 had been treated in the State asylum. Ten males and ten females were capable of labor; but those who could not labor were unprovided with occupation or amusement. Fifty-four human beings, with at least some intellect in action, though not guided by reason, shut up in one building, with neither occupation or amusement! The only restraint resorted to, aside from handcuffs, is close confinement and cautious showering. This asylum has one bath tub, but not a full supply of water. The lunatics are required to wash daily. All the rooms have single iron bedsteads; some are fastened to the floor. Only one sleep in a bed, and the bedding is comfortable. The diet is respectable. About two-thirds come to a table; the remainder are served in the wards or their rooms. The sexes are kept separated, and all are under the care of the warden and his wife, assisted by two females. The rooms are clean, and the air in the upper rooms good. All had shoes during the winter. This asylum, recently erected, was designed to accommodate 48 patients; 74 are crowded into the space designed for 48 to occupy! Three escaped during the year, who have not returned. The supervisors appoint a physician, who visits the institution twice

every week, and oftener if necessary, but with reference only to the physical condition of the inmates. Dr. Thomas Arner remarks of the building, "Its design is for the physical welfare of the insane poor, without reference to their ultimate recovery. * * * The personal cleanliness of the inmates, and that of the wards and sleeping apartments, the quantity and quality of food, together with the admirable discipline adopted and maintained, are all that can be desired, and reflect the highest praise upon the warden and others, upon whom devolves the care of this unfortunate class of people. There are deficiencies of an important character still to be provided for, in order to render the institution in all respects complete. In its present capacity the building is designed to accommodate forty-eight persons only, eleven of which number are provided for in the basement. The impropriety of crowding seventy-four insane persons into this limited space, some of which is damp and unhealthy, needs no remark, (it needs the severest censure from all humane citizens.)" Increased capacity is essentially necessary to the physical welfare of the inmates of this institution. There should also be a more bountiful supply of water, increased facilities for bathing, and for cooking, and for washing, enlargement of the dining halls, and better provision for exercise in the open air. The question whether, in an institution of this character, the treatment adopted should have in view the ultimate recovery of the inmates, cannot at the present be easily determined; and its solution properly rests with those upon whom devolves the responsibility of their care. The following facts are submitted :

All the insane formerly confined in the poor house (under the old system) have very much improved in every respect, by cleanliness and kind treatment, since their removal to the asylum.

Cases that have been returned as incurable from the State asylum at Utica, have afterwards improved to a marked degree, and in two or three instances nearly well."

MONTGOMERY COUNTY.

The population of Montgomery county poor house is eighty-three, ten of whom are lunatics. None of them are capable of labor. Nine are males and one female; seven are of native and three of foreign birth. Eight of this number have been treated in the asylum. They have been severally admitted since 1849. Five of the number are under thirty years of age. Three are destructive and one requires occasional restraint by muff and strap, or cold bath. The house has a supply of water, but no bath tub; the hands and face are "partially" washed daily. The bedding is straw in ticks on bedsteads,

one sleeping in each bed. One sleeps on straw without other bedding. The diet is plain and substantial. The rooms are heated by a stove in the main hall. The rooms are generally clean, and the atmosphere of the rooms good. Their garments are changed every week; three had shoes and one had neither shoes or stockings during the winter. Fourteen can be accommodated in separate cells, but thirteen is the greatest number confined there. One escaped during the year who was not returned. The institution receives recent cases but they do not receive care with reference to their ultimate recovery.

NIAGARA COUNTY.

One in four and three-quarters of the inmates of the poor house of Niagara are insane, there being eighty-nine inmates, of whom twenty-one are lunatics. Nine of them have received treatment in an asylum. Ten are of native and eleven of foreign birth. Seven are males and fourteen are females. Twelve are confined to the house; fourteen are mild cases. Three males and one female are capable of doing some labor; six are destructive to their clothing, and the same number are restrained either by straight jackets or leather muffs. The *whip is sometimes*, though rarely, used to enforce discipline.

The yard is supplied with cistern and spring water; there is one bathing tub. There are basement cells in the building with cement floors, but they are not often used. The bedsteads are of wood, not fastened to the floor; one sleeps in each bed; three sleep on straw without other bedding. Such as are able come to the table with the sane paupers.

The building is heated with a furnace, but no attention is paid to the uniformity of heat or ventilation. Rooms with barred doors and grated windows, cells and wards, furnish the only means of grade for the insane. The apartments, with one or two exceptions, were very clean. The sexes are separated but the attendants are paupers. All had changes of under clothing and shoes, but not all had stockings. Twenty-five is the full number that the house is designed to accommodate. Recent cases are received; four were received in 1864. The medical attendance has no reference to ultimate cure, nor is compensation for medical service rendered with such a view.

ONEIDA COUNTY.

There are 560 inmates in the poor house of Oneida county, ninety-seven of whom are insane; forty-three are males, and fifty-four females. Fifty-five are natives and forty-two are of foreign birth. Within the year four have died, nine have been discharged and two have absconded. Sixty of the whole number have been treated in

the State asylum, and been returned as incurable or for some other reason. Most of the number have been received into the county asylum since 1850, though the admittance of one dates back to 1843.

About forty of the whole number are capable of performing some labor, half of whom are males. None of the females labor out of doors. Those who are unable to labor have out of door amusements, such as "pitching quoits, playing ball, swinging, fiddling, dancing and singing." The females are amused with books and papers. Fourteen require occasional restraint from destructiveness to their clothing; for this purpose leather muffs, straight jackets, cold baths and fixed chamber chairs are used. Thirteen are filthy; five are past seventy years, and one is eighty eight. The building has a full supply of water, and one bath tub in each department, and beside daily ablution, the insane are required to bathe weekly. The building is heated by furnaces, and every room is ventilated from the ceiling. There are no basement cells. The building is of brick, two stories and a basement, with ceilings of ten feet; the single rooms are five feet by nine, and the double one seven by eleven feet, and the sitting room halls twelve by sixty-four feet, and all well lighted. In no case does more than one sleep in a bed; the ticks are filled with straw; sheets, quilts and straw pillows constitute the bedding. The fare is wholesome and simple; the patients all come into the dining hall to the table and are waited upon by attendants.

In the winter all the rooms are heated, and a comfortable temperature is maintained. The building has five wards, and allows of some accommodatian for the various grades of the insane. It admits of complete separation of the sexes, and the whole is under the care of a man and his wife, with female assistants. Perfect cleanliness is maintained and good ventilation.

The institution *does not provide for recent cases;* they are sent to the State asylum in Utica. All have shoes and stockings, and some change of clothing, the same as sane paupers. The building is designed to accommodate about ninety patients. A physician is employed who visits the institution twice every week or oftener if necessary, but the treatment has no reference to ultimate recovery. The pauper insane are probably better cared for than in almost any of the other counties of the State excepting New York and Kings. The occasion of this may doubtless be attributed to the liberal influence that is exerted over the public mind by the State asylum at Utica. The fact that it makes no pretentions to the care of recent cases is most commendable, and the portion who first receive treatment at the State asylum is therefore large.

ONONDAGA COUNTY.

No report.

ONTARIO COUNTY.

Dr. John B. Chapin, of Brigham Hall Asylum for the insane, says: "The location of the county house is healthy; the grounds are ample. The department of the county house devoted to the insane comprises the first floor of two wings adjoining the main building. There are two day rooms for females, and one for males. The increased demand for females has caused the erection of additional accommodations for their care. The day rooms are about 33 by 10 feet. The sleeping rooms are partitioned from these day rooms by open upright bars; the sleeping rooms are 6 by 7 feet; windows on one side of the room in two wards furnish the means of ventilation. The windows are intended to be out of reach, and too high for observation out of doors. They evidently afford ample means of escape. There are no means for classifying patients. The attendants seem to be superannuated paupers. *There are* no means for properly treating recent and curable cases. The means of escape are abundant, and the disparity of the sexes may be owing to this circumstance. The class of insane now confined are mostly demented persons, who have occasional paroxysms of excitement; they sit with their feet crouched under them, and bent over in the appearance of hopeless dementia. During the summer ventilation is good; in the winter there is probably lack of fresh air and heat. The floors were clean; the walls needed abundance of whitewash. The general appearance of the insane and of the department was cleanly, and there was a disposition on the part of the keeper to do what his means permitted for the comfort of his charge. More efficient means should be adopted to prevent escapes. A suitable attendant should be employed for the care of the insane; a daily inspection by the keeper should be made, and a bath room prepared for more frequent ablution."

The population of the poor-house is one hundred and seventy; twenty-nine are lunatics—the ratio being one in six; twenty-one are females, and eight are males. The dates of their admission are not to be obtained. Five are filthy; a large number are demented; only two have been treated in the State asylum; five are capable of labor; those who do not work have no amusement; the violent are restrained by a leather muff and by seclusion. The building has a full supply of water for domestic purposes, but not for bathing. The rooms are heated by a coal stove in the hall, and ventilated from windows on the side of the building opposite the cells; all have bedsteads and bedding, and are apparently comfortably fed. There are no accom-

modations for the various grades of the insane; pauper attendants are employed to take care of the lunatics. The condition of the rooms for cleanliness and ventilation in summer is fair. But two or three had shoes in the summer: [how many were without them in the winter?] The county receives recent cases. Five have escaped during the year who were not returned. There is no sufficient provision for medical treatment, and none is directed to each case with reference to its ultimate recovery.

ORANGE COUNTY.

The total number of the insane poor of the county of Orange is thirty-eight; twenty-five of them are in the poor-house at Goshen, and thirteen are cared for at an asylum in Newburgh. The county supports four at the Marshall Infirmary at Troy. A large majority of the whole number are of American birth. Of those at Goshen eight males and four females are capable of labor; the others are furnished with no amusement; only three are destructive to their clothing; the restraint used is by straight jacket or shutting in the cells. The house is without a bath tub, and all are not required to wash hands and feet daily. The windows may be dropped to obtain ventilation; [are they?] In all the rooms occupied by insane there are bedsteads, and straw bedding is used; the straw is changed once in two or three months. There is no regular system of diet, but ordinarily good fare is furnished, which is served at a common table to a part, and to others it is taken to their cells. No attention is paid to uniformity of temperature, nor are there any accommodations for the various grades of insane. The sexes are kept separated, but the only immediate superintendence is from an inmate of the poor-house. The rooms are kept comfortably clean. "Some of the male inmates are believed to have vermin" on them. The institution receives recent cases—several having been admitted in 1864, but no medical attention is bestowed with reference to the ultimate recovery of each case.

The building at Goshen was erected in 1850, and though adjoining the main building is separated from it. It is two stories high, of stone, and through the center in each story a hall extends, with windows at each end for light and ventilation. The rooms open from each side upon these halls. Each room has a window. Inmates are allowed the free use of the halls and of the yards.

In 1853 the town of Newburgh withdrew its paupers from the county, and provided for their maintenance by the purchase of lands and the erection of suitable buildings; a residence for the superintendent, and sane paupers, and a wing, communicating by a hall with

the main building, for the insane. The building for the insane is two stories, of brick, with a hall through the centre, and rooms opening out on either side. Each room has a window, and a ventilation in the hall. There are here eighty-one paupers, of which thirteen are lunatics; six are able to do some labor. There are none who require constant restraint. The house has a supply of water, and three bathing tubs, and the insane are required to bathe their whole bodies once in each week, besides washing hands and face daily. The building is heated with a furnace, the temperature regulated by a thermometer; the inmates are comfortably bedded on husks or straw for bedding—each one having a single bedstead; they are also sufficiently and comfortably fed—the diet being changed every day in the week. There is no accommodation for the various grades of the insane, but in each ward there is an attendant for the males, and one for the females. The condition of the rooms are cleanly and neat. There are rooms for thirty-two, but eighteen is the highest number there confined. The institution does not take recent cases. All are kept comfortable. A physician visits the house about four times a week, but the insane do not receive treatment with reference to recovery.

Dr. Wm. P. Townsend, who visited these institutions, in a very able report, remarks "that the selection of persons to superintend these institutions is too often based upon considerations of business capacity to the exclusion of any apparent estimate of moral fitness." And again, the management of the domestic, dietetic, and other internal arrangements, are most carefully studied, to the neglect or exclusion of the moral, mental, or even humane necessities of the unfortunate persons compelled by want, destitution, or disease to reside therein.

Questions of economy alone explain why such incompetent and morally unfit persons, "selected from the paupers," are assigned to the immediate care of the insane poor. Even if they possessed sufficient capacity for the position, want of interest in the well-being of the lunatics, coupled with the well known infirmities of temper usually belonging to these individuals, should, except in rare instances, forbid their employment in the capacity of nurse. Dr. Townsend urges, however, that keepers should be exempt from the responsibility, since they have no authority in the selection of capable attendants.

"The asylum at Goshen is sadly deficient in means and appliances for promoting bodily cleanliness in the persons of its inmates."

The population of Orange county in 1860 was 63,812, giving one insane pauper to every 1,680 of its inhabitants to be treated and provided for in our charitable asylums. These facts may well start

the inquiry, what can be done to mitigate or improve their condition, or, if possible, restore to them reason enthroned, and capacity for self support? The moral impossibility of giving the insane proper care, or suitable medical treatment, under the present system of county houses is set forth by Dr. Townsend, the inadequate compensation to physicians, and the necessity of doing something to improve the present state of things, is set forth; and yet, imperative as this necessity appears, the lunatics in Orange are better cared for than in most of the other counties.

ORLEANS COUNTY.

The oldest resident of the Orleans county poor house is eighty years old, and was admitted to the poor house in 1841. The whole population is sixty-five, fourteen of which are lunatics; eight are males, six are females; eleven are native and three of foreign birth. Eight are mild cases, three violent; seven filthy; eight have been treated in an asylum. Three are capable of labor; the others have no employment; all are at times destructive to their clothing; one requires restraint by handcuffs. The building has water, but no bath tub. The building is of wood; the sleeping rooms, or cells, 6×9 feet, open out of a hall 9×36. No arrangement for ventilation. There is a coal stove for heating the hall, but no attention is paid to uniformity of heat or change of air. There are no accommodations for the various grades of insane; the males are in one ward, and the females in another. The attendants are from the sane paupers. In this county recent cases are sent to the asylum at Utica. All have changes of under garments, and all were provided with shoes and stockings during the winter. The house is designed to accommodate seventeen, but, for the last few years, there have been but fourteen, at any one time, in it. The medical treatment differs nothing from that which sane paupers receive, and the moral management is nothing.

OSWEGO COUNTY.

There are at the Oswego county poor house seventy-two inmates, and twenty-nine of them are lunatics. Twelve are males and seventeen are females; eighteen are of American birth. The register of the institution does not show the first admittance of these insane. Twenty of these have been treated at the State asylum in various periods from a single month to nine years. Three males and six females are capable of labor; those who cannot work have some light amusement furnished to them, such as playing chequers, light sewing, &c. Five require occasional restraint and one constant restraint. The means used are a leather cap, leather muffs, occasionally a dark

cell, &c. The house is supplied with water and has a bath tub in it, in which the insane are required to bathe every week. There are bedsteads in all of the rooms, and only one sleeps in each bed. The diet table appears sufficient and wholesome. The males are confined in one ward and the females in another, and the superintendent or overseer, his wife and one female assistant take care of the insane. The rooms were clean and well ventilated. The house is designed to accommodate twenty-eight, but thirty-three have at one time been confined in it; but few of the mild cases are put with the sane paupers. The institution received recent cases, but to no considerable extent is the treatment directed to effect their cure. The amount appropriated for the medical care of the insane and the whole number of inmates is but one hundred and fifty dollars, inclusive of medicines. Oswego city cares for a few of its own insane without sending them to the county house.

The building at Mexico is 64 by 30 feet, three stories high, with suitable apartments for the insane, and also for culinary purposes. The location is healthy, and the rooms have generally a clean, wholesome look. The building is warmed by a furnace and kept comfortable in winter. The diet was not only sufficient but well cooked. There seems to have been a most commendable effort to send the patients of this county to Utica for treatment. Nearly all of the cases are now of a mild type, which is, perhaps, owing to the modification of the disease by early treatment. These incurables are kindly cared for, and if not all that might be, yet much is done to make them comfortable.

OTSEGO COUNTY.

There are sixteen lunatics in the poor house of Otsego county, and it is a remarkable circumstance that fifteen of this number are American born. Four are males and twelve are females. Two of this number have been insane since 1837, and one since 1845. Five have been treated in an asylum and returned to the county poor house; eleven have never had the opportunity for a cure that an asylum affords. Five of this number are violent, and three are filthy in their habits; four require mechanical restraint. One male and four females are capable of doing some labor. Their only amusement is to saunter about the grounds when the weather will permit. Though the house has one hundred and thirty inmates, there is not a bathing tub in it. The house is supplied with water, and the insane are washed once each week.

The building is of wood with a stone basement, and is three stories high; each story is eight feet. The rooms are 24 by 14 feet. All sleep on beds and bedsteads. They all eat at one common table, and

the fare is plain and nutritious. Occasionally three persons occupy one cell. The sexes are kept separated, but they have only pauper attendants in the immediate care of them. Two had neither shoes or stockings during the winter; five had no shoes. They are kept separated from the sane paupers.

Recent cases are received, but they do not receive care with reference to their ultimate recovery. The sanitary regulations are good, and the system of restraint mild and yet efficient. There is no convenience for the various grades and conditions of the insane. The mild and the violent, the sick and the well, the clean and the filthy, are all confined in the same ward. They are visited by a physician once each week. From 1837 to 1864 is a long and miserable existence in such a place.

PUTNAM COUNTY.

Putnam county has but one insane person in its alms house. This one can do no labor, she is a female and was admitted about 1854. The case is a mild one, but has never received treatment in an asylum, or with reference to ultimate recovery. One case was discharged from the alms house in March, 1864, having been but a short time in confinement. The case confined is not required to wash hands and face daily, and is cared for by the keeper and his wife. The county take recent cases; some are provided for in private families, but the returns do not indicate what number. The county house was not designed for the care of the insane, but can accommodate three or four.

QUEENS COUNTY.

Queens county has but fifty-five pauper inmates in its county house. Eight of this number are lunatics; five are males, and three are females, all are of foreign birth. Seven have been admitted within the last four years. None have received treatment in an asylum. All are mild cases; five are able to do some labor, the rest amuse themselves about the premises without restraint. The house has water, but no bathing tub, and the insane are only required to wash hands and face. There is on the farm a pond of clear water, with sandy bottom, where they bathe in the summer time, if they please, occasionally under supervision. Two and three sleep in one bed; all are comfortably fed and comfortably cared for, and have changes of garments. Recent cases are received, and the county physician visits the institution daily. They all appear clean and neat, and their treatment aims also at their recovery.

RENSSELAER COUNTY.

Rensselaer county poor house has two hundred paupers; twenty-one of whom are insane. Ten are males, and eleven are females. Only five are native born. About thirteen cases are mild; not one of the whole number have ever received treatment in an asylum, or with reference to recovery. Thirteen of them are filthy. Several of them have been in the poor house so long that it is impossible to ascertain the date of their admission; they have grown demented, idiotic. Four males are capable of moderate labor, and five females. For the others there is nothing to do, nothing to beguile a single hour of long and weary years. Six are destructive to clothing; three require occasional restraint, the means resorted to are hand cuffs and confinement. The house has a full supply of water but no bath tub. The insane are required to bathe "occasionally."

The building is of brick, two and three stories high, with eight feet ceilings, and with rooms 12 by 18 feet. Iron bedsteads are used, not fastened to the floor; two sleep in one bed sometimes; the straw bedding is changed four times in a year. The diet is very plain, and sent to such as are not able to come to the table. The only convenience for the various grades of insane is separate rooms for the violent; they have only such care as paupers bestow in their daily attendance. Two escaped during the year who were not returned, and two were removed by their friends. The institution receives recent cases, though it never aims to cure one of them. A physician visits the poor house twice in a week, and oftener if necessary.

In 1857 this institution presented a condition repulsive in itself and revolting to humanity. It may be in a cleaner condition now, and there may be none now among the lunatics who are confined without privilege of coming daily to the open air, and who lie down in straw at night. Such was not the condition then, and doubtless there is yet ample room for improvement in the care which this class of unfortunates should receive.

RICHMOND COUNTY.

In a population of sixty-three in the poor-house of Richmond county eleven are insane. They have all been admitted since 1853, and two of them have received treatment in an asylum. Six are males, five are females, three of the cases are mild, eight are excitable, and six are violent. Two are filthy in their habits, and three require mechanical restraint. Two males are capable of out-of-door labor, for the rest neither occupation nor amusement is afforded. The building which is of stone, two stories high, is supplied with water, though no bath tub has yet been introduced. The patients are required to wash daily. One case, on account of its violence, is

confined in a basement cell, and as he is a cripple he cannot get out of it; but attention is paid to the ventilation of the room. The other rooms are variously 9x9, 13x7, 13x16, 9x10, &c., each lighted by twelve lights of 8x10 glass. Two rooms in the attic do not open out of doors; they are used for confining female patients when violent. The bedsteads are of iron, only one in each room, and one only sleeps on each. There are none who sleep on straw alone. Those who are confined to their rooms are served with their meals by attendants; the others go to a general table which is abundantly supplied—the vegetables coming directly from the farm. The building is heated by furnaces, though no attention is paid to the uniformity of heat by a thermometer. The attendants for the insane are paupers. Their garments are changed every week. The insane are visited by the physician of the establishment as occasion requires.

The building was never constructed with reference to the accommodation of the insane, but in a wing of the building occupied for the purpose they are made as comfortable as in any institution of this class. All have shoes, and none were without them during the winter. The appearance of the rooms is clean and tidy. The restraint used is by hand-cuffs, gloves and belt, confining to the bed and confining to the room.

ROCKLAND COUNTY.

The whole population of the Rockland county poor-house is fifty. During the year sixteen insane have been among this number, but the list of lunatics in present confinement is reduced to ten by two deaths, three absconded and never returned. Two of the number had been treated in an asylum. With three exceptions, the cases were generally of a mild character. Six were mentioned as filthy, and six as requiring occasional restraint by confinement. One has been in the poor-house since 1841. Ten were of native, and six foreign birth. Four were males and twelve were females. Only one male is capable of labor. The remaining nine have neither amusement, occupation, nor employment, except "reading and singing." Five are destructive to clothing. The only mechanical restraint that is resorted to is to lock up the turbulent in cells. The house has not a full supply of water, nor are there any bathing tubs in it. The building is of wood, two stories high, with rooms 6x10, the ceilings being 9 and 8 feet respectively. The bedsteads are of wood and fastened to the floor. Straw is used as bedding, and is changed about once a week. "The diet is variable," and is served out on plates the same as to the other paupers. The sleeping rooms are not heated. The accommodation for the various grades of the insane is as follows: "The mild are allowed the freedom of the house, and

the violent are confined in cells," and only paupers are employed in their care. There is no real accommodation for more than three persons—yet the number on hand is ten. Five is the greatest number ever confined at one time in the cells. Three escaped during the year, who never returned—three insane wanderers, or one-fifth of the whole number—it does not appear what ever became of them. They receive no medical treatment except when sick.

ST. LAWRENCE COUNTY.

The report from the county of St. Lawrence shows that the name of *poor*-house is no misnomer in that county. It is an old wood building, three stories high, the ceilings being 8½, 8, and 7 feet respectively, with rooms 12x12 and 8x12, and CAGES 3 feet by 7 and 5x10, with small windows opening out of doors, but the cells have no such window. The building is not supplied with sufficient water, nor has it any provision for bathing. In such a building one hundred and thirty paupers are kept, thirty of whom are insane; thirteen are males and seventeen are females; thirteen are natives and seventeen of foreign birth. Only four of this number have ever been treated in an asylum. Fifteen of this number are of filthy habits, and four are destructive. One case was admitted in 1840.

Three of the males and three females are capable of labor. Those who cannot work have neither occupation nor amusement, and though no restraint is used by handcuffs, WHIPPING is resorted to, and the violent are put in *cages* to subdue them! There are no arrangements for cleanliness, ventilation or uniformity of heat in winter. The cells have no windows opening out of doors. The bedsteads are of boards, and two sleep in one bed (or bunk). The morning diet is potatoes, meat and bread; dinner, meat and bread; night, soup, which is distributed on plates or in cups to each one. The rooms are not all heated, even in winter, and insane are confined in rooms without heat. At night ten are confined in a single cell. The sexes are not separated, but mingle promiscuously, and the attendants are from the family of paupers, who are grossly unfit to administer to them.

It is a startling fact that in a building not entirely heated, in rooms not heated at all in the winter, three-quarters of the insane inmates had neither shoes or stockings during the cold of winter; and there is no reason to suppose that in such a state of things the clothing is anything like ample. The ultimate recovery of lunatics is not held in view, nor can it be where there is no provision for their care, where they are congregated and kept without reference to either science or humanity.

SARATOGA COUNTY.

Between the fashionable resorts of Saratoga and the guests who crowd them, and the poor house of Saratoga and its lunatic inmates, there is a sad contrast! The *poor* house of Saratoga has one hundred and fifty inmates, fifteen of whom are insane. Nine are males and six are females; nine are natives and six of foreign birth; eleven of these cases are of mild form. One has been a resident since 1842, and another since 1844. Four of the number are capable of performing some labor, the others are provided with no amusement. Three are destructive to their clothing, and two require occasional restraint by handcuffs or otherwise.

There is a supply of water but no bath tub; the insane are not required to bathe, nor are they required to wash hands and face daily. There is no arrangement for ventilation or uniformity of heat in winter; all have beds and bedsteads, the straw is changed twice every year. The building is warmed by stoves, wood and coal being used for fuel. There are no accommodations for the various grades of the insane. Pauper attendants are alone employed to care for them. The institution receives recent cases. Five have shoes; in the winter ten had neither shoes or stockings! There are ten cells, into which twenty lunatics have at times been crowded. No provision is made for medical treatment, they are visited only when sick; no case is treated with reference to its ultimate recovery.

The select committee on "charitable institutions, &c.," in 1857, said, "of this institution, of the inmates ten are lunatics, three males and seven females, all are paupers. They receive no special attendance. Five are confined at times in cells, and some are restrained at times by shackles and handcuffs. The keeper reports that some have been improved. Lunatics have escaped from the house and not again been found. Eleven of the inmates are idiots, five males and six females; all are over ten years of age."

This house is old and badly dilapidated. The rooms are low, sadly out of repair, and the air in the sleeping rooms most foul and noisome. It is is very well attended, however, by the present keeper, and is kept in as good order as possible.

"Corporeal punishment is administered to men, women and children."

Dr. Gilbert, in 1864, says: "The building is old and considerably dilapidated. The foundation has settled unevenly, giving a degree of distortion to the floors and ceilings; and the ceilings are cracked and crumbled off. The floors are somewhat more uneven from the knots protruding, and particulary around the outside doors, which are somewhat decayed. The ceiling in the rear part of the building

is broken and low, the windows are small and loosely fitted, the base shrunken, leaving an open space, and thereby rendering it cold and uncomfortable in cold and damp weather. The furniture as the bedsteads and chairs are very old and worn. The bedding is cotton and quite ordinary, yet in a majority of the rooms clean, the floors and woodwork clean also. The inmates were thinly and poorly clad, yet clean and tidy, and apparently healthy."

There has evidently been no improvement. The miserable old prison of 1857 and the rickety and ill-arranged gloomy place for confining the unfortunate insane poor of 1864, is one and the same—a burning disgrace to the county and the State.

SCHENECTADY COUNTY.

In June the inmates of the poor house of Schenectady county numbered ninety-one (the November number is one hundred and twenty-one). Twenty-five are lunatics. They have been severally admitted since 1850. Nine are males and twelve are females. Thirteen are of native birth. Eight are mild cases, and four are filthy. It is creditable that sixteen of these cases have been treated in an asylum. Six are capable of labor; others have sewing, books, newspapers, Sunday school papers, and the liberty of the yard to amuse them. One female requires constant restraint; two males and three females require occasional restraint. Muffs are used and a closed cell in the second story. The house has two good wells and one cistern, but no bath tub. The insane are not required to bathe, though their hands and faces are washed daily. The building has no basement cells. The bedding consists of ticks filled with straw, and the straw is changed once a month. One sleeps on straw without other bedding. In several of the beds two persons sleep. The halls are heated by registers from furnaces, but no attention is paid to the uniformity of heat in the winter. There are no accommodations for the various grades of the insane. The sexes are not separated except at night; one attendant beside the paupers is employed in the care of the lunatics. The rooms were clean and the atmosphere in them "excellent." The accommodations are separated from those of the sane paupers; the accommodation is designed for thirty persons, twenty-five being the highest number ever confined. The insane are visited by the county physician twice a week, or when required. The institution does not receive recent cases.

Dr. A. M. Vedder says: "The attention paid to the insane of this county will compare favorably with any public or private asylum in the State. I am familiar with the treatment of the insane in Philadelphia, and think our insane quite as well cared for as theirs." Awarding all due credit to the care bestowed upon the insane poor

in Schenectady county, which is certainly better than in some of the adjoining counties, we must beg to differ widely from Dr. Vedder in the first part of his opinion. Where there is no bath tub, where insane are not required to bathe, where but one attendant beside paupers is employed to care for the insane, where they are not seen by the physician more than twice a week, the care can hardly challenge comparison with that received at the State asylum or Brigham Hall.

SCHOHARIE COUNTY.

Schoharie county poor house has eighty-one inmates. It has three insane. These are not separated from the sane paupers, but live and mix with them. The mechanical restraint used to control one is to TIE HER TO THE BED WITH A ROPE. The house has not a supply of water. It has no bathing tub; the insane are not required to bathe. The rooms are only ventilated by the windows. The sexes are not separated; they have only the care which paupers give them. The county receives recent cases. In a word, no possible provision is made for or care given to the insane of Schoharie county; and it is most fortunate that there are only three of them.

SCHUYLER COUNTY.

Schuyler is seemingly the county of sane people only. There is but one insane person supported by the county, and he is cared for in the family of his brother, and is without restraint, being a mild case. He has been treated in the asylum, and is now capable of some labor.

SENECA COUNTY.

The county house in Seneca county has sixty-five inmates, thirteen of whom are lunatics. One was admitted in 1830, one in 1843, one in 1845; one had received treatment at Brattleboro and at Utica, and six others in Utica. The ratio of those receiving asylum treatment is one-half. Four of the six that have received treatment at Utica are now mild cases. Four cases are filthy and four destructive. Nine are males and four are females. Eight are of American birth. Three are capable of doing out of door work. Some of the females are employed with patch work and knitting. The only means resorted to for controlling the violent is by confining them to their rooms. The house has not a full supply of water. The rooms are provided with bunks for sleeping. The bedding is straw and feathers, the straw being changed once a month or oftener. The diet is represented as ample in material and variety. The males all come to the table; three females carry food to the others on plates. There is no convenience for the various grades of insane; the more violent are not allowed to have their liberty. All are cared for by a keeper and his

wife, who, of course, have no possible knowledge about the scientific management of lunatics. The rooms are clean and well ventilated, and the clothing is comfortable and sufficient. The institution has sixteen rooms; the greatest number in confinement is fourteen. A physician visits the institution weekly, or when necessary; but no case is treated with reference to its recovery.

STEUBEN COUNTY.

The county house of Steuben has ninety-five inmates, of whom eighteen are insane. Three others had been confined during the year, but had escaped without being returned. Nineteen were of American and three of foreign birth. One was admitted in 1839; all the rest since 1850. Ten of the number had at some time been treated in an asylum, so that the dates of admission do not show conclusively the full period of lunacy. Twelve are capable of labor. The others are provided with neither employment or amusement. The mechanical restraint employed is a close room and hand-cuffs. The house is supplied with water by three wells and two cisterns, but it has no bathing tub, and it is doubtful if the insane are required to wash daily. No arrangement is made for cleanliness, ventilation, or uniformity of heat in winter. The material used for bedding is straw, in ticks, not frequently changed. The cells are warmed only through the hand-holes in the doors of the cells from the heat in the common hall. In the house the sexes are separated, but not so when they go into the yard. Paupers give them what care they receive. The rooms are far from clean, and the air in them more or less fœtid. Recent cases are received at this institution, which is designed to accommodate thirty or forty. Its whole condition may best be set forth in the language of Dr. A. H. Cruttenden, who made the investigation:

"But few remarks can be offered in this connection without entering upon an elaborate criticism of the house, grounds, and management of the institution in extended detail. Enough that the institution comes far short of the standard to which an enlightened community, with abundant recourse, should aspire. The grounds, though ample and possessing many natural advantages and surroundings for a true home of charity, are really destitute of an attractive feature—chilling to every sense of refinement or charitable sentiment.

"The buildings pertaining to the poor-house proper are old, comfortless, illy constructed, and never suited to the purposes for which they were designed. The insane house, though new built, of brick, and sufficiently large for the accommodation of its present number of inmates, is badly arranged. The cells are too small, with no provisions for ventilation. The air even now, in summer, when doors and windows are open, is burdened with noxious vapors and effluvia

inconsistent with health or comfort to the inmates. The facilities for warming are very imperfect, so much so that patients confined in cells must suffer in extreme weather. The common hall is warmed by registers from a furnace in the basement, and the cells only through hand-holes in the doors, 6x8 inches square. The building is two stories. First, occupied by males; the second, by females. The brick walls are unplastered, coarse, and repelling, the partitions made of 1½ to 2 inch plank unmatched, and now shrunken so that large fissures are exposed for the harboring of chinch and other vermin. Close stools constitute a portion of the fixtures of the cells, connecting with the vaults below (though these are now closed against use.) The idea is repelling, though the fact in part has been superceded. The bed-ticks, by their collapsed condition, indicate a short supply of straw, and that old and well worn. Bed clothing, blankets and sheets (when existing), are worn with age, and have suffered long for soap and water; and even the patients throughout the house, in person and clothing, indicate most clearly that the institution is far from being hydropathic in its tendencies. The rooms are, many of them, lumbered up with old trumpery, old cloths, rags, bottles, old tobacco pipes, &c., &c., in a most untidy condition, save in two or three instances where the patients had a very healthy impulse towards cleanliness, be it sane or otherwise.

"One of the most evident evils connected with the institution is the want of systematic classification of its inmates. Male and female, old and young, sick and well, sane or otherwise, the vicious, profane and unclean with the virtuous, gentle and religious, are massed together in a common herd. In fact, the house is a sort of store room, where are thrown in together the odds and ends of a depraved and degenerated humanity—a hot-bed for the rearing and nurture of paupers, without an effort to reclaim from vice, folly, or disease.

"No especial provisions are made for the medical treatment of the insane. A physician is employed by contract, who is required to visit the house twice a week (a ride of two miles), subject to all accidental calls, and furnish his own medicine, for some years past awarded to the lowest bidder at $50 a year. These facts taken in connection with the population of the house, ranging from one to two hundred—a proportionate large number of children and infirm persons—very little at best can be expected from the medical service rendered the institution towards alleviating the condition of these unfortunate creatures. Indeed, it is little use to write or talk; the half cannot be told.

"The county house of Steuben is and has been since I have known it a bye-word, a shame and disgrace to the county, and yet much credit is due to the keeper, and not a little to the respective superintendents for doing all they can perhaps in their respective positions, and the circumstances under which they are compelled to act. But, true it is, all have a responsibility in the premises; it is an institution of the people, for the people, and is an honor or otherwise, as it nears the full meaning of its lofty and Christian purpose."

SUFFOLK COUNTY.

There is no county house or lunatic asylum in Suffolk county. The custom is to send all troublesome lunatics either to the New York State asylum at Utica, or to the asylum at Brattleboro, in Vermont. The investigation was not pursued to find the number of insane in private families; nor is the number that the county supports stated; probably it is small. It is a wise plan the authorities pursue.

SULLIVAN COUNTY.

The building in which the insane poor of Sullivan county are confined, is fifty yards from the poor house. It is roughly constructed and sets low on the foundation. The frame is hemlock, planked and sided with the same material. It is divided in one room through the center, with cells on either side all unfinished. The center room is heated by stove and the cells are only heated from this room either by a door or an aperture through the door. The rooms in the poor house building for the accommodation of the more mild cases are 10x10 feet. The number of paupers is sixty-four; twelve are lunatics; four are capable of labor. Those who do not labor have no form of amusement or occupation. The house has water but no bath tub. No arrangement is made for ventilation. There are three rooms that have no window opening out of doors. Seven sleep on straw without bedsteads or beds, the straw being changed (as for horses,) some every day others once a week. The building is heated by stoves with wood for fuel. No attention is paid to the uniformity of heat in winter, nor to ventilation. Only paupers are employed to care for the insane. The cells were tolerably clean, but the atmosphere not good. The arrangement is made for sixteen lunatics, but twelve is the greatest number confined at any one time. It is creditable to say that six of the number confined have at some time received treatment at Utica. The county receives recent cases, but does not make provision for their treatment with reference to their recovery.

TIOGA COUNTY.

Dr. L. H. Allen, of Tioga county, remarks, "It will be seen at a single glance, that the insane in our poor house are in a most miserable condition. Pity and disgust are at once excited. Under existing circumstances it is impossible for the keeper to improve the condition of those who are confined in cells. Nothing short of a new and properly constructed building can meet the demands of this unfortunate class of persons. When the county will feel able and willing to make the outlay I cannot say."

There are in the poor house eighty-five paupers, twenty-one of whom are lunatics. Six of the number are of foreign birth. Thirteen are males and eight are females. The records do not show the years of their admission. One has been confined more than twenty years. But five of these cases are classed as mild; eleven are of filthy habits; six have been treated in an asylum; several are idiotic. Four males and four females are capable of labor. Those who do not labor have no form of amusement. Ten are destructive to their clothing. The house has water but no bath tub. The insane are not required to bathe at all, nor to wash hands and face daily. Insane are confined in cells without the privilege of coming daily to the open air. The light is admitted into their cells through a grating in the front of the cell. Bunks are used in some of the rooms, with straw, upon such eight sleep: others have straw in ticks. The food is distributed in tin basins, or put into the hands of the individual. The building is heated by a coal stove in the hall, which can at best only imperfectly heat the cells. [The plain truth is that in very cold weather it does not heat them at all.] No attention is paid to the uniformity of heat by a thermometer. There are no accommodations for the various grades of the insane. The sexes are not entirely separated. Male attendants are employed to take care of the female insane, and they only paupers; pauper attendants for all the lunatics. The rooms are filthy, and the air in them bad. This institution receives recent cases. Mild cases have their garments changed weekly. Five had neither shoes nor stockings during the winter. The building is designed to accommodate only eight. It has now in it twenty-one! The cells are in two separate outbuildings. They are seldom or never visited by a physician. No case receives care with reference to its ultimate recovery.

TOMPKINS COUNTY.

The building which contains the cells for the insane is an addition to or an extension of the main building for the poor. It is but one story high, and contains nine cells, varying in size as follows: 8x8 feet, 6x7 and 5x7. These cells have no windows; and when the insane are allowed to go out, they mingle with the sane paupers; but if they are confined at all, it must be in these cells, and they are so confined the most part of the time. The population of the county house is fifty-six. Only six are insane; one other was sent to the State asylum, and one other died. Of the six remaining, one had received treatment in the asylum. Three were able to perform some labor; two required occasional restraint, by handcuffs or shutting in cells. The house has no bath tub, and the insane are required to

wash hands and face only *three times a week*. All the rooms are not supplied with bedsteads; one sleeps on straw, without other bedding. Two eat in their cells, and the others come to the table with the sane paupers, from whom they receive such care as they get. In the cells the air was impure, and one was very filthy. The institution receives recent cases. Their under garments are changed on Sundays. All had shoes during the winter, except one. The lunatics are not visited by a physician unless they are specially sick; and no case receives care with reference to its recovery, even though it be a recent case.

ULSTER COUNTY.

The examination from Ulster county shows that in the poor house there are twelve insane paupers, three of whom are males, and nine females; all of whom are registered as having been admitted since 1859; but as three of them have been treated in the lunatic asylum, the date is not an index to the period of their lunacy. None of this number are capable of any labor; at least none are furnished with any suitable employment or amusement of any kind. Two of them require restraint a part of the time, and one constantly. Two are both violent and filthy. The house is represented to have a full supply of water, though it has not a single bathing tub for its one hundred and thirty-five inmates! The building is of wood, one story high, and the rooms are six feet by nine and a half. Not all the rooms have bedsteads in them; two sleep on straw, without either bed or bedsteads. And the food is served "the same as rations," by which it may be understood that each insane person is handed a certain quantity of food. The building is heated with stoves, without any special regard to uniform temperature. The sexes are kept separately, but male attendants are employed to care for the female insane, and they are pauper inmates of the institution. After this style the provisions of the county house is for twenty-six insane. In this remarkable state of things, to the question "Does each case receive care with reference to its ultimate recovery?" the reply is, "It does!" A physician visits the institution twice in each week. In 1857 the committee appointed to visit charitable institutions, &c., reported of this as follows: "Of the inmates fifteen are lunatics—three males and twelve females. Five have been admitted during the present year. They receive no special medical attendance, but a *male* attendant supplies their ordinary wants. *Ten* are confined in cells, and one restrained with chains. Beside the main building are several small old buildings on the premises, in one of which—a very poor one—were twelve cells for lunatics, very open, and where it is barely possible to keep them from perishing." "In the house are

twelve idiots—four males and eight females. Two of the females are under sixteen years of age." The investigation of 1864 fails to show any considerable improvement in the care of the insane paupers in Ulster county.

WARREN COUNTY.

While in several counties the ratio of insane to the paupers is one in four, in Warren county it is but one in seventeen and a fraction. There are fifty-four sane and three lunatics in the county house. The number is so small that they receive no particular care, nor is any special provision made for them; they do not labor; they are locked in cells if violent; they sleep on bunks; their diet is pork, potatoes, bread, beans, &c., and milk once a day; two eat at the table; to one the food is carried. They are cared for by paupers only. In the female apartment the atmosphere was *bad*. The county takes recent cases. No provision is made for medical treatment, and they receive none.

In short, the insane take their chances, and receive no care worthy that name.

WASHINGTON COUNTY.

The Washington county poor house is a three story brick building, with nine feet ceilings, the rooms being seven by eight and eight by ten, lighted by windows two feet square. The whole number of inmates is (120) one hundred and twenty, of which thirty-six are insane. Several were admitted previous to 1840. Three are past seventy years of age. Thirteen are males, twenty-three are females; twenty-five are of native birth; ten have been treated in an asylum; twelve are capable of doing some labor. Those who do not labor have no light occupation or amusement, except going into the yard when circumstances admit of it. One is constantly restrained by hand-cuffs. The building is supplied with water, and has one bath tub; the insane are required to bathe occasionally.

The bedsteads are of wood; the bedding, straw and feathers. Two sleep on straw without bedstead or bedding. Those who are able eat at a common table, others have their food distributed to them. No attention is paid to the uniformity of heat in the winter, though it is designed to keep the rooms comfortable. Two are often confined in a single cell. The attendants employed to care for the insane are paupers. The county receives recent cases. The building is designed to accommodate fifty. They receive no medical treatment with reference to an ultimate cure. Cleanliness, comfortable clothing and sufficient food, are the three virtues of the institution. It aims at nothing more.

WAYNE COUNTY.

Of eighty inmates in the poor-house of Wayne county, twenty are lunatics, or one in every four. They have been severally admitted since 1850; thirteen are males and seven are females, Fifteen are of native birth. Fourteen of the cases are mild; two have been discharged during the year, and two have been sent to Utica for treatment. Previous to September, four cases were admitted in 1864; nine cases were admitted in 1863. Five males are capable of doing some labor; the only amusement for the others is going in the yard when the weather will admit of it. One is constantly restrained by handcuffs. The house has no bath tub, and the insane are not required to bathe more than their hands and face daily. One is confined in a basement cell without the privilege of coming daily to the open air. All the inmates have beds or bedsteads, none sleep without them; the straw in the beds is changed every two months. Their food is served on tin plates in their rooms. The rooms are heated by stoves in the hall, but no attention is paid to uniformity of heat in the winter. The rooms are neat and clean; in most of them the air is good. It is intended to separate the insane from the sane paupers. The accommodations are designed for ten lunatics, though twenty are now in confinement, crowded into the meagre room designed for ten. Three escaped during the year who are not returned, and two were removed by their friends. There is no provision for their management or treatment with reference to recovery. The county receives, as will be seen, recent cases. A new building designed to be used exclusively for the insane is in process of erection.

WESTCHESTER COUNTY.

To a population of two hundred and twenty-five in the poor-house of Westchester county, twenty-two are lunatics. Seven are males, and fifteen are females. Three-quarters are of foreign birth. Seventeen of these cases are of mild form of insanity. One was admitted in 1829. It is not known that any of the whole number have been ever treated in an asylum. Several have been admitted to the poor-house for the second or third time. Four males and eight females are capable of labor. Those who do not labor have no amusement or employment. The manner of restraint and coercion is by straight jacket, handcuffs and confinement. The house has a full supply of water and two bathing tubs, in which, however, the insane are washed and bathed at no particular times. The building is of stone, two and a half stories high, with eight feet ceilings, and rooms 8 × 5 feet. The cells are in the centre of the building, with corridors,

after the style of a prison and penitentiary, and receive their light only through the doors. They are, of course, dark and ill ventilated, and there is a total and studied absence of all that contributes to cheerfulness or mental elasticity. The building is heated by furnaces, and a comfortable temperature is maintained in winter, but there is no provision for the various grades of the insane. The sexes are separated, the males in one ward and the females in another, with pauper attendants, and one male assistant in the care of the female insane. The general appearance of the rooms is clean and tidy. Provision is made to confine twenty-five insane, but thirty-nine have at times been forced into the space designed for twenty-five. All have shoes, and their under garments are changed weekly. Whenever they are sick, the physician of the alms-house visits them, but they never receive treatment with reference to their convalescence, yet the county does not, in view of such a startling fact, hesitate to receive recent cases for confinement, not for cure.

WYOMING COUNTY.

No report.

YATES COUNTY.

Yates county poor-house has eighty-seven paupers, fifty-four males and thirty-three females. Six are insane, one male and five females; four of the females work a little, or, if unable to work, they amuse themselves in the care of pauper children. The male patient requires occasional restraint, but only confinement in a cell is resorted to to enforce restraint. The house has one bathing room, and is supplied with water, except in dry times in the summer. The insane are required to bathe every one or two weeks, and to wash hands and face daily. The more rational, room and sleep with the paupers, and eat at a common table with them. One male and one female are each confined in a separate cell. The county receives recent cases for treatment, and they are visited by a physician about once a week. They are usually healthy, and have the appearance of being comfortably and carefully taken care of.

Table Showing the Summer Population of Poor Houses, the Number of Insane, and the Number Capable of Labor in Each.

	Summer population.	Insane.	Capable of labor.
Albany	425	145	32
Allegany	89	21	7
Broome	85	21	8
Cattaraugus	49	17	11
Cayuga	75	29	10
Chautauqua	120	27	9
Chemung	48	8	3
Chenango	70	20	8
Clinton	--	--	--
Columbia	127	27	--
Cortland	88	31	6
Delaware	--	26	--
Dutchess	100	24	8
Erie	500	121	12
Essex	93	9	4
Franklin	--	5	2
Fulton	--	10	8
Genesee	--	32	6
Greene	--	19	0
Hamilton	--	--	--
Herkimer	148	31	4
Jefferson	174	61	22
Lewis	41	11	5
Livingston	115	14	9
Madison	94	25	9
Monroe	--	74	20
Montgomery	83	10	0
Niagara	--	21	4
Oneida	--	97	40
Onondaga	--	--	--
Ontario	170	29	5
Orange	--	38	12
Orleans	--	14	3
Oswego	--	29	9
Otsego	--	16	5
Putnam	--	1	0
Queens	55	8	2
Rensselaer	221	20	4
Richmond	63	11	5
Rockland	50	10	1
St. Lawrence	130	30	6
Saratoga	130	15	4
Schenectady	121	25	6
Schoharie	81	3	--
Schuyler	--	1	1
Seneca	65	13	3

	Summer population.	Insane.	Capable of labor.
Steuben	95	18	12
Suffolk	--	--	--
Sullivan	64	12	4
Tioga	85	21	8
Tompkins	56	6	3
Ulster	--	12	--
Warren	54	3	--
Washington	120	36	12
Wayne	80	20	5
Westchester	225	22	12
Wyoming	--	--	--
Yates	87	6	4
		1345	386

ARTICLE XVIII.

Remarks upon a demonstration of the optical principles of the ophthalmoscope and its use in diagnosticating diseases of the eye. The following remarks were introductory to the exhibition of several varieties of ophthalmoscopes, accompanied by explanations of their peculiarities. By HENRY D. NOYES, M. D., of New York city.

"Every physician when examining a case of internal disease feels a degree of embarrassment in deciding upon the nature of the malady, if he is obliged to depend largely upon the statements of the patient in collecting the symptoms. If he must form an opinion, whose correctness is to be governed by the degree of intelligence, of accurate observation and statement, and by the memory and self-possession which the sufferer enjoys, the practitioner feels himself obliged to scrutinize and sift the account of symptoms with the utmost severity—ofttimes acting the part of a cross-examining lawyer—before he considers himself at liberty to frame a definite conclusion. Many times he cannot extricate himself from error, and many times he is exceedingly disquieted by the uncertainty which hangs over his judgment.

"If, on the other hand, the case admit of the application of means of objective examination, and his inferences are based upon the evidence of his own senses, he feels able to arrive at the truth with much greater probability. The investigation will now be within his own control; the proper education of his senses and habits of discrimination will guide him aright.

"In illustration of this point, I need but to allude to diseases of the thoracic viscera, and what has been done for their elucidation by auscultation and percussion.

"I bring before you now another illustration of the same kind in the application of the ophthalmoscope to the revelation of diseases of the eye. How much better is objective examination than subjective statement; and how, with both combined, accuracy of diagnosis and correct principles of treatment may be secured, otherwise impossible!

"In the eye diseases occur, which often destroy sight or render the enjoyment of vision impracticable, which have been classed under the names amaurosis, amblyopia, and asthenopia. Some of these affect the nutritive tunic of the fundus oculi, the choroid; some the percipient structures, the retina and optic nerve; some the refractive media, which form the image upon the retina. These structures are

behind the pupil; and this aperture, designed expressly to admit light into a dark chamber, to the eye of the observer, presents an impenetrable blackness; as if, instead of being a way for the passage of light, it were a deep curtain, specially designed to cloak the mysteries of vision from the gaze of the curious inquirer.

"The blackness of the pupil, or, in other words, the absence under ordinary circumstances of reflection from the fundus oculi has been attributed to the pigmentation of the choroid, which absorbed all the light.

"If this were a satisfactory explanation, it would not account for the want of reflection from the surface of the optic nerve disc, which contains no pigment, but is of a pinkish-white color. That this explanation is not correct, is proven by an experiment with Albinoes. From their pupils a reddish gleam is reflected; but if an opaque screen be brought close to the eye, and an opening be made in it of the same size with the pupil, the eye of the Albino will then show as dark a pupil as any other—its ordinary brilliant color depends upon the penetration of light through the sclerotica; if this be cut off by the screen, and light be permitted to enter only by the pupil, it is clearly proven that the absence of reflection from the fundus is not due to complete absorption of light by the pigment of the choroid. The problem then returns upon us, why do we not have light returned to us from the fundus oculi? It is true, the posterior concave surface of the eye-ball is a feeble reflector of light, and the pupil is usually but a small opening; if the pupil be artificially expanded, we do not find the interior of the eye illuminated, nor ourselves enlightened as to its appearance. The eyes of many animals, it is well known, give forth a luminous reflex, and in certain diseases of the human eye, as choroidal tumors, &c., a bright color is discerned through the pupil.

"An experiment first made by Prof. Brücke, of Vienna, shows us how to accomplish this object. A person with expanded pupil is placed before him, and a bright light brought in front of his eye at the distance of two or three feet; the observer brings his own head close to the light, and has a screen placed between it and himself to protect his own eyes from the glare; his own eye and the light are thus directly in front of the eye to be examined; he sees the pupil no longer dark, but luminous with a diffused red color. This experiment gave rise to earnest study and speculation in the mind of Prof. Helmholtz, of Heidelberg University, Germany, and he finally developed the true principles of illuminating and rendering visible the interior of the eye, and the methods by which the examination may be conducted. He invented the ophthalmoscope. This was in 1851."

Dr. Noyes, by the help of large diagrams, explained the optical principles of the instrument, and displayed several kinds of ophthalmoscopes; among them a binocular ophthalmoscope. He also made remarks upon the morbid conditions of the eye, which the instrument discovers. "It brings to view not only the membranes at the bottom of the eye, but it makes known the refractive power and qualities of the eye. By it can be known with approximate accuracy the degree of deviation from normal refractive power, and what it is. If an eye be myopic (near sighted), or hyperopic (far sighted), or normal, the ophthalmoscope points it out to the observer, without asking the patient or testing his vision. Moreover, certain cases of want of symmetry in the curves of the refractive media, known as cases of astigmatism, when in considerable degree, are discerned by the ophthalmoscope, the want of symmetry is seen in the fact that the optic nerve disc, which is circular, appears more or less oval. Yet further opacities in the media, upon the cornea, in the crystalline lens and in the vitreous humor, are immediately and clearly brought to view. The diagnosis of cataract in its earliest stages and slightest development, becomes a matter of the greatest simplicity. Thus with this instrument we are able to correct the errors which patients sometimes undesignedly make in calling themselves near sighted, or normal sighted, where they may have either the contrary error of refraction, or may have no fault whatever of refraction, but a dimness of perceptive power. Yet further, a means is given us for detecting attempts at fraud and deception in cases of pretended near sightedness and amaurosis. Such attempts have to be guarded against in these days of military conscription."

Dr. Noyes then exhibited Jaeger's plates of diseases of the fundus oculi, and also Liebreich's Atlas d'Ophthalmoscopiè, making brief remarks upon some of the illustrations; pointing out how the choroid, the optic nerve and the retina become the seat of disease, and what a specific name and character can thus be affixed to loss of sight, instead of resorting to the indefinite terms amaurosis and amblyopia. "The practical advantage attained is, firstly, accurate diagnosis; hence more probable prognosis and more judicious treatment. If a case be incurable the fact is discovered, and a vain, perhaps exhaustive course of treatment is avoided. If curable, the truth at once discovered takes from the mind of the patient an incubus of dread foreboding of blindness, and brings to the physician his chief delight in relieving human suffering.

"Again, mistakes of diagnosis in supposing the impairment of sight depend upon a congestive or inflammatory state of the retina or choroid, are discovered in many cases whose real difficulty consists in the need of optical assistance by glasses. Many cases of asthenopia

are thus permanently and immediately relieved, and the individuals restored to the use of their eyes and to their chosen activities in life.

"These are some of the advantages which we gain by the ophthalmoscope giving us positive facts in place of inferences; objective phenomena in place of subjective statements. The difficulties in the use of the instrument are two-fold; some skill in management of the hands is needed to keep the mirror rightly directed and the objective lens steady, this is soon acquired. Another difficulty arises from the reflection from the lens of the patient's cornea; a little management enables one to get along with these so that they cease to be troublesome. It is necessary to be acquainted with some of the elementary principles of optics to avoid illusions, and to understand the refraction of the eye.

"When the fundus oculi is brought to view, the interpretation of the appearances, their correct appreciation, must be acquired by observation and experience. Here teachings and the consultation of plates are of the same value as in studying with the microscope. The analogy between the two instruments is perfect. The instruments and their working must first be understood, and afterwards the objects they reveal must be critically studied, to enable one to pass upon them a sound and reliable judgment."

ARTICLE XIX.

A case of Epithelial Cancer of the left cheek, and the adjacent portion of the lips. Removal of the entire substance of the cheek and successful closure of the opening by a plastic operation. By Joseph C. Hutchison, M. D., Prof. Surgery Long Island College Hospital, Surgeon to Brooklyn City Hospital, etc., with illustrations. Notes by J. C. Goodridge, Jr.

Mary Sullivan, ætatis 54, a native of Ireland, and residing at No. — Baxter street, New York city, applied to me for treatment April 1st, 1864.

She stated that two years ago she pulled out a long hair which grew from the centre of the left cheek, when a small quantity of matter exuded. The skin soon began to ulcerate at this point, and this ulceration gradually increased until it now extends over a surface measuring two inches in its transverse by two inches and a quarter in its vertical diameter. Fig. 1 (photograph).

She has been accustomed to keep her face tied up to conceal its deformity, in consequence of which the motions of the lower jaw are limited from contraction of the masseter muscle. She suffers no pain in the diseased part; her general health is good. I cannot learn that she has any hereditary tendency to disease.

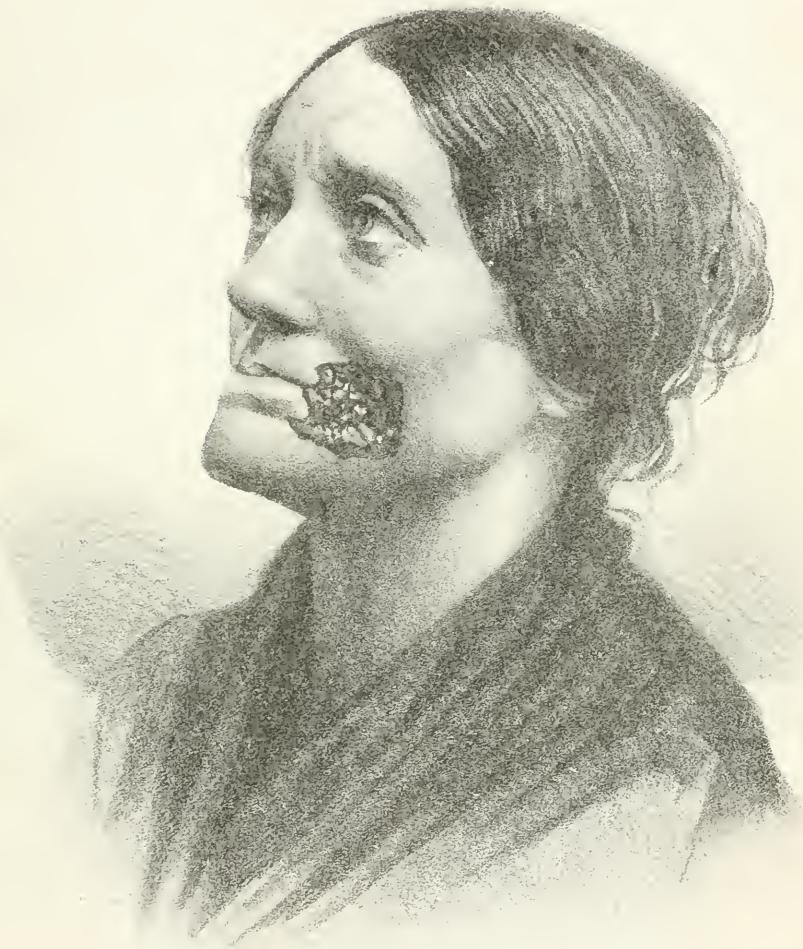
On the 6th of April I performed the following operation at the surgical clinic of the Long Island College Hospital, in the presence of the medical class:

The entire diseased portion was removed by an incision circumscribing it and extending entirely through the soft parts, making an opening into the cavity of the mouth two and a half inches in both its transverse and vertical diameters; about one-third of the outer half of both lips were included in this incision. The hemorrhage was so free as to require the application of several ligatures.

The soft tissues around the opening were then detached with a scalpel, from the upper and lower jaws, and an effort was made to close the wound by sliding the integuments toward the centre, but this could not be accomplished. I then made the incisions indicated by the dotted lines seen in fig. 2, through the integuments, and detaching the four flaps thus formed carefully from the subjacent parts glided them over the opening.

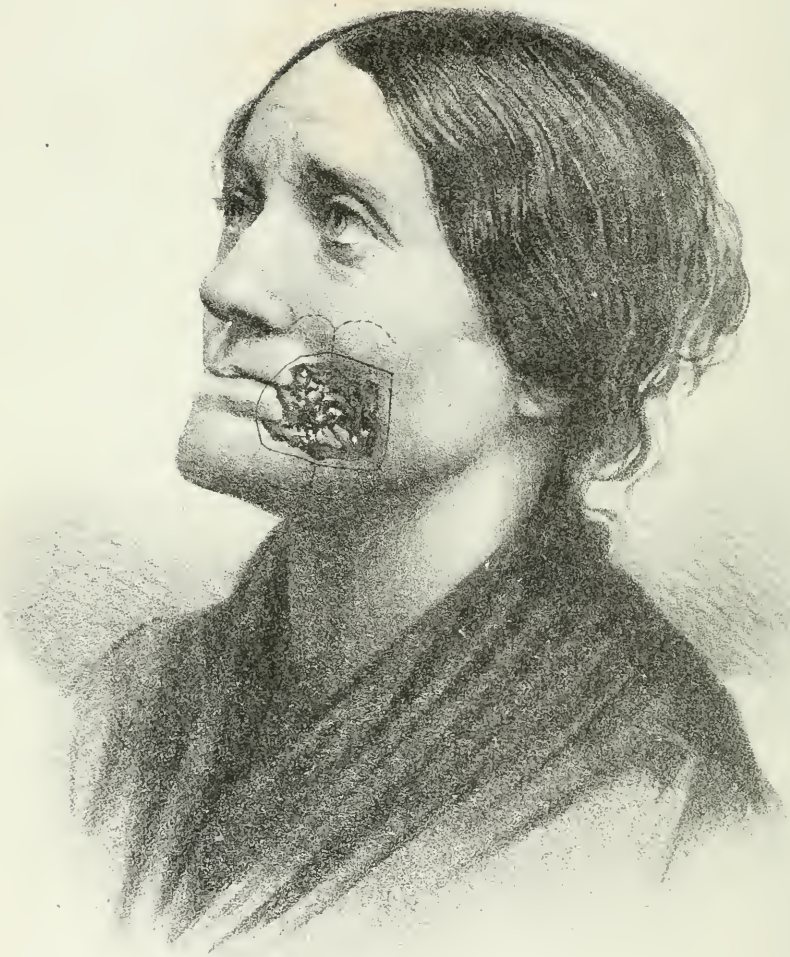
The margins of the posterior flaps came together well, but the front half of the anterior flaps could not be approximated, so that a large triangular opening remained, its base being towards the mouth; this was closed by carrying the lips back and securing them to the

Fig 1.



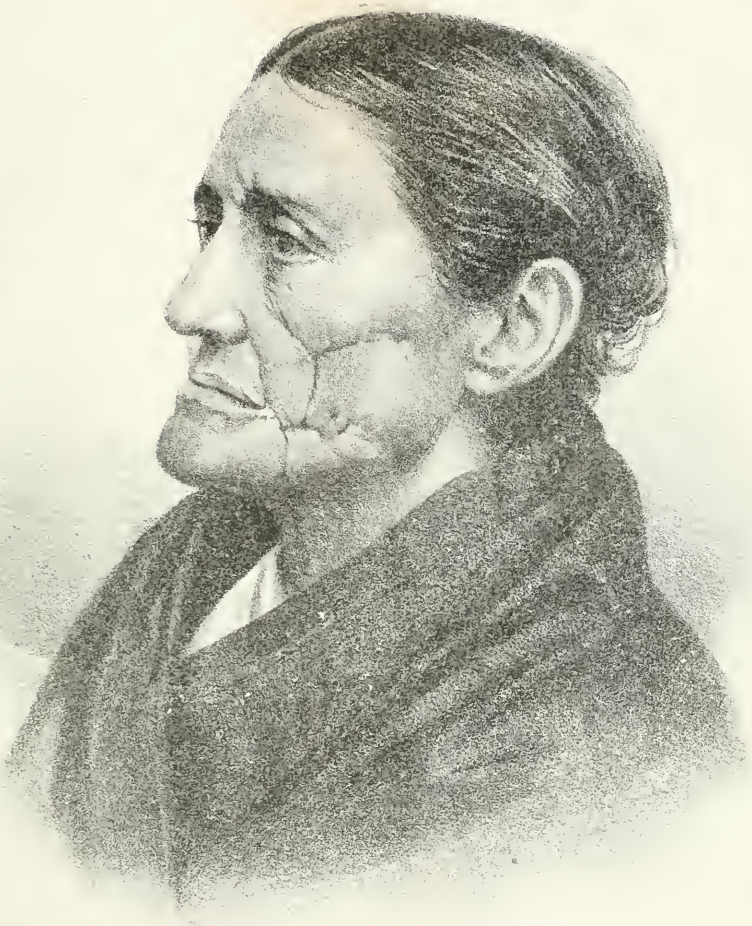
Epithilial Cancer of the face removed by an operation April 6th 1864.

Fig 2.



Shows the line of incision for the removal of the disease; the dotted lines indicate the incisions for the four Flaps.

Fig.3.



A view of the left side of the face in its present condition

Fig. 4

A front view of the face in its present condition.

flaps. The parts were fastened together by the hair lip suture. There was no great amount of tension in any particular direction.

She was ordered nourishing food, in a liquid form. Warm water dressings were applied to the flaps and the raw surfaces, from which they were removed.

April 8th. The needles were removed—the threads remaining—except two nearest the mouth which were removed on the following day.

April 10th. Suppuration taking place at the line of union of the flaps, has caused their separation throughout two-thirds of their extent.

April 12th. The flaps were again brought together, by silver wire sutures, which soon sloughed out. From this time the margins of the wound were kept as nearly in apposition as possible, by means of adhesive strips.

She had erysipelas in the face and head for about five days. The inflamed parts were circumscribed by tinc. iodine, and kept wet with acetate of lead lotion—wine and quinine were ordered.

From this time she gradually improved in general health, the wounds united throughout the whole extent, with the exception of a space two-thirds of an inch in size, at the angle of the mouth, and the parts from which the flaps were removed.

She was discharged from the hospital May 12th. I had expected to close the opening, which increased the width of the mouth two-thirds of an inch, by a subsequent operation, but when I saw her at the end of four months, it had closed spontaneously, and now (Jan. 15, 1865) her face presents the appearance shown in the photograph, fig's. 3 and 4.

She opens her mouth well, there is no dribbling of saliva, her general health is good, the cicatrixes look healthy, and she expresses great satisfaction at being thus relieved of her unsightly disease.

A microscopic examination of the diseased part by Dr. S. Fleet Spier, showed it to be epithelial cancer. When we consider the obstacles to prevent union in the above case, viz: the free hæmorrhage, necessitating the application of several ligatures, the suppuration and separation of the flaps after the removal of the pins, (consequent on an attack of erysipelas,) their second separation after being closed by silver wire sutures, the necessity of approximating them a third time by means of adhesive strips, which were constantly being loosened by food and discharges from the mouth and cheek, the result of the operation is more satisfactory than could have been anticipated, and inspires us with a renewed respect for the *vis medicatrix naturæ*.

ARTICLE XX.

DIPLOTERATOLOGY.

An Essay on Compound Human Monsters, comprising the History, Literature, Classification, Description, and Embryology of Double and Triple Formation, including the so called Parasitic Monsters, Fœtus in Fœtu, and Supernumerary formation of Parts or Organs in Man. By G. J. Fisher, M. D.

Introduction.

The great deviations which occasionally occur in the development of man and the lower animals from the normal type, and which are commonly embraced under the general term—monstrosities—is a subject so full of interest as not only to have attracted the attention of common observers, but to have engaged the profound consideration of philosophers in all ages. Hence we find frequent allusions to the subject in the writings of ancient naturalists and anatomists. The historical and bibliographical sections of this essay show how numerous have been the writers who have treated the subject of monstrosities more or less comprehensively.

In modern times, the French and German languages especially abound in treatises on monstrosities; or as the subject has recently been much more appropriately denominated—the science of *Teratology*. The English language contains no systematic treatise on the subject. Several very brief, though highly creditable essays have, however, appeared in the Transactions of one or more scientific and medical societies, and in various medical journals. In addition to these may be mentioned the articles under the title of "*Monster*," in the general encyclopedias. Among them, probably the best for the period in which it was written, is that of William Lawrence in the Medico-Chirurgical Transactions of London (Vol. V, 1814), which has been reprinted in the successive editions of Reese's Cyclopedia. Allen Thompson has contributed a valuable article to the London and Edinburgh Monthly Journal of Medical Science (Vol. V–VI, 1844), under the title of "Remarks upon the early condition and probable origin of Double Monsters." The article "*Teratology*" in the Cyclopedia of Anatomy and Physiology, written by the late W. Vrolik, of Amsterdam, Holland, consists of a very brief synopsis of the subject, and is destitute of pictorial illustrations. No American writer has yet attempted to treat the subject systematically. The paper of Dr. Conant, published in the Transactions of the New York Academy of Medicine (Vol. II, p. 268, 1862), under the com-

prehensive title "An Essay on the Science, Causes, and Anatomical Peculiarities of Human Monstrosities," is an article of less than thirty pages, consisting of a few references to cases of monsters in general, and a brief discussion of the subject of maternal mental influence in the production of abnormal development of the fœtus, being intended merely to call the attention of the Fellows to the subject.

In view of the deficiency in the English and American literature of teratology, the writer at first conceived the plan of preparing a manual on the subject. The magnitude of the science not admitting of treatment in a small compass, and the immense labor required in a satisfactory research, deterred him from the execution of the design. An elementary monograph on Duplex Formation or Compound Monsters is now prepared, under which limited head most of the important facts, principles, and laws of teratology can be displayed. The practicability of this plan is derived from a somewhat careful study of the general subject, in which it has been observed that every form or variety of malformation or monstrosity which has appeared in single bodies, has also been found, in a series of cases, of the so-called double monsters—that is to say, in a series of duplex formations or compound monsters, we find superadded, and co-existent, all the forms of malformation which have occurred in a series of monstrosities in single individuals. It therefore follows, that the study of compound monsters, to a great extent, includes the consideration of monstrosities in general.

The necessity for a monograph on this subject is rendered apparent by an examination of the defective manner in which cases of monstrosities are usually reported. Most of the cases are claimed by the writers to be unique, the nomenclature consisting of a few such terms as the following: "*lusus naturæ*," "horrible monster," "remarkable phenomenon," "united twins," &c. It is not strange that this should be so, when the fact is known that the subject of teratology is scarcely referred to in any of our standard works on physiology, and obstetrics, and that every systematic treatise in this department of science, is beyond the reach of most medical gentlemen in this country, either from being enveloped in the obscurity of a foreign language, or in consequence of the expensiveness of the greater portion of works of this character.

It is hoped that the present monograph will prove acceptable to the profession of this country, and aid in diffusing a more general knowledge of the nomenclature, classification, description, and literature, and particularly the laws of abnormal development, which have been deduced from embryological researches. A large proportion of the reports of cases of duplex monsters which have ap-

peared in the scientific journals, are very meagre and imperfect, and betray an almost entire want of teratological knowledge on the part of the writers; hence many important facts are omitted and lost, and in some instances, doubtless cases are not reported at all, in consequence of the difficulties connected with a satisfactory description of them. This essay is intended to aid in future reports of cases, and point out the relative, and classical position, and importance of the various forms which may from time to time occur.

It has frequently been supposed by those into whose hands a case of monstrosity has fallen, that it was remarkably rare, if not unique; the desire to preserve the specimen entire for the cabinet or museum has deterred them from making an anatomical examination of its internal organization, the description being restricted to the external configuration; while on the contrary others may have entered into needless detail regarding the structure of the common varieties of monsters, which had been repeatedly described by different observers. All this arises from a want of knowledge of the comparative rarity of the several forms, and of the results of previous observations on the subject.

The question *cui bono*, in relation to a treatise on this subject may arise in many minds, whose attention has not been directed to this field of inquiry. To which it may be replied, that aside from its practical relations to obstetrics, the subject is invested with profound interest in its relations to ebryology and general physiology, as it embraces all the conditions of development in all the multiform classes of organized beings, and that there is scarcely any general fact, any anatomical or physiological law, on which it does not reflect light, and either confirm or disprove. It has been truly said, that the necessary consequence of an exact and profound knowledge of anomalies will be, that the study of normal and abnormal facts, intimately associated together, to lend to each other a mutual and powerful support.

The relative importance, and even the necessity, of certain organs in the maintenance, or continuance of life, has been chiefly learned, from a careful examination of cases of monstrosity. Nearly every organ in the human body, has been found absent in a series of individual cases. In some instances only admitting of fœtal, or intrauterine life, while in others more or less permanent viability has been proven to be compatible with the lowest rudimentary development, or entire absence, of organs which are commonly regarded as essential to life. For example, cases have occurred in which the brain was entirely absent, while every other portion of the nervous system was normally developed. In others, a well formed body has

existed, in which the vascular system has been completely developed, and symmetrically distributed, and yet no rudiment of a heart could be discovered—thus demonstrating the independence of the development of nerves in relation to the brain, and of blood-vessels, to the great central organ of the circulation.

The history of anomalies of organization is no longer to be regarded as a mere detail of prodigies, and sports of nature, resulting from supernatural causes, but requires to be studied as a science which is governed by natural and rational laws, no less certain in their operation and results, than those which are concerned in normal development.

We are indebted to Isadore Geoffroy St. Hiliare, for the classical term **Teratology*, a name so appropriate for the science of monstrosities. This term is now fully established by general adoption. The present essay being restricted to compound monsters, the term *Diploteratology* is here proposed as a distinctive title for this special branch of the subject.

Under this technical heading are to be included all the varieties of abnormal duplication and supernumerary formation which have been observed in the human body. This monograph is therefore restricted to a limited portion of the broad field of teratological inquiry, as it treats exclusively of monstrosities in which there are unequivocal signs of duplicity, or abnormal multiplicity of structure, or parts; including double, and triple formations, the so called "parasitic monsters," "fœtus in fœtu," and to a certain extent supernumerary formation of unimportant parts, in otherwise single individuals.

The plan of this little work, embraces a brief history of the science; a chronological list of its bibliography; a synopsis of the principal arrangements or classifications that have been given by various writers; the distinctive characters or diagnosis of the several forms of compound monsters; with illustrative cases; the embryology of duplex formations; its relations to obstetrics and medical jurisprudence, and a general summary of the principles and laws deduced from the study of the subject in all its relations.

As far as possible the description of every genus of compound human monster has been illustrated by an account of one or more cases, derived from American or English sources. In the absence of proper examples in our own, the literature of other countries has been laid under contribution. Comparative diploteratology has also been included to a limited extent.

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*Teratology—derived from τερας, 'a monster,' and λογος, a 'discourse.'

There is scarcely any form or degree of abnormal development or monstrosity to which the human body is subject, that has not also been observed to have its analogue in some of the genera of the lower animals. This fact so important in its relations to the doctrine of maternal mental influence in the production of monstrosities, will receive attention under its appropriate head.

Accompanying the enumeration of the general and distinctive characteristics of the various forms of double monsters which are treated of in the following pages, parallel cases, occurring in the lower animals, have been introduced as far as practicable.

All the principal forms have been illustrated by a simple and accurate figure, drawn either directly from nature, a photograph, or reduced from more elaborate engravings of authentic cases.

The author has not aimed to make the essay exhaustive, nor does he claim much merit on the score of originality; his chief object has been to present the largest amount of information on the subject in the most lucid and concise manner. He has endeavored to embody the principal facts of this branch of the science, and give the reader the results of recent embryological investigations in relation to abnormal development, which is the only true source from which light can be derived and reflected, upon the obscure questions of the origin and cause of double monsters.

The interesting and valuable researches of Wolff, Von Baer, Reichert, and Allen Thompson, have been recently supplemented by the investigations of Prof. Panum,* Dareste,† and Lereboullet,‡ whose labors have contributed much towards the solution of many embryological questions hitherto based on merely hypothetical grounds.

To the works of these authors, and many others, among which should be specially mentioned the recent and admirable work of Förster,‖ the writer is under great obligations for facts and illustrations, of which he has freely availed himself.

His grateful acknowledgments are also due to his friends Profs. Isaac E. Taylor and Jacobi of New York city, and Profs. Wyman and J. B. S. Jackson of Boston, not only for the use of such works as they possessed on the subject, but also for their encouragement and counsel.

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* Untersuchungen über die Entstehung der Misbildungen in den Eiern der Vögel, von Dr. P. L. Panum, Prof. der Physiologie an der Universität zu Kiel, mit. 107 Abbildungen auf 12 Tafeln, pp. 200, Berlin 1860.

† Annales des Sciences Naturales, 1862, Zologie, T. xvii, p. 31.

‡ Annales des Sciences Naturales, 1863, Zologie, T. xx, Nos. 3, 4, p. 177-272. "Recherches sur les monstrosities du Brochet observées dans l'oeuf et sur leur mode de production," par M. Lereboullet.

‖ "Die Missbildungen des Menchen, Systematisch dargestellt" von Dr. August Förster, Nebst einem Atlas von 26 Tafeln mit Erläuterungen Jena 1861. Band 2, quarto.

History of the Science of Teratology.

From the earliest ages to the present period, monstrosities have attracted the attention of philosophers as well as the illiterate. Among the ancients, Hippocrates, Aristotle, Pliny and Galen, and even Empedocles and Democritus noticed their occurrence and investigated their causes. These early writers comprehended their nature nearly as well as most of the modern authors on the subject previous to the commencement of the eighteenth century. The Greeks and Romans, however, probably gave very little special study to monsters, as we find no description of the various forms or classes in any of their writings. This remark applies equally to Arabian medical authors.

It must be admitted that the history of monsters, until quite recently consisted chiefly of marvellous tales, inaccurate descriptions, and absurd and superstitious prejudices.

The following is an example of the grandiloquent style in which treatises on monsters, in common with other scientific (?) works were dedicated and introduced to the public, even as recently as the early part of the last century. Joannes Adamus Kulmus, M. D., in the year 1724, published his "*Descriptio-Anatomico-Physiologica, alicujus Fœtus Monstrosi*," this work consisting of only fifty pages is dedicated, (in latin, which, I give in translation,) as follows:

"To his Sacred Royal Majesty, the illustrious Burgrave, the renowned Senate, the very magnificent president; the very magnificent, magnificent, noble, and extremely mighty magistrates, and counsellors of the flourishing state of Stadt-Grund. To the fathers of the country, the Lords, Patrons and Nobility, who are to be worshipped with the eternal reverence of a most devout mind, to be cherished with all illustrious kinds of duties, my most magnificent, magnificent, generous, very mighty Lord and Patron, this work is submitted."

After having in the full dignity of wondrous discovery blown his latin trumpet, over the double monster baby, born in the suburbs of Stadt-Grund, (Gedanus,) he informs us, that amid the labors of dissection he "ploughed out" a sonnet on the dead monster in which he incorporated most of its abnormities. The following translation is as nearly literal as possible.

A monstrous fœtus was at Stadt-Grund born,
Which dead itself, the mother too did slay;
Who had borne four sound children in her day,
And as a fifth produced this thing forlorn.
Nature two girls had by the bosom tied;
Of medium size, in length a Flemish ell:
They were dissected, and the dame as well.
One funicle the two with blood supplied:—

One weighty liver was there—but two galls;
Curved was the sternum; which one diaphragm
Bound to the ribs—a heart monstrous to name,
Which had three chambers, and four auricles.
Thus with one heart there lived a maiden pair,
To say they had not *concord*, who shall dare!!

It may be interesting to the reader to know that on the appearance of the heads, before the body was fully delivered, they were baptized Adam and Eve, thus hitting the unknown sex at least half way.

Isadore Geoffrey St. Hilaire divides the history of monstrosities into three periods, characterized by the state of ignorance or knowledge which prevailed concerning them, viz., the fabulous, the positive, and the scientific period.

The fabulous period comprises every age antecedent to the eighteenth century. The positive period embraces the first half of the eighteenth century. The scientific period extends from the middle of the eighteenth century to the present time.

I. The Fabulous Period.

The fabulous, ignorant, or superstitious period of the history of human monsters is characterized by a want of authentic cases, and by ridiculous and absurd hypotheses concerning their origin and development, which were as numerous and fanciful as the various imaginations of the several writers. The cases were almost exclusively regarded as prodigies entailed upon the parents as punishments in consequence of divine anger, or as the result of demoniacal influence. The latter view was the most general. Under the belief that it was impossible for God to create such deformed and frightful objects, they were considered as creatures of Satan, and looked upon as inexplicable wonders of bad omen. These superstitious notions, which not only prevailed universally in ancient times, but continued in vogue until quite recently, led to practices of the most cruel and unnatural character. The doctrine of their satanic origin gave rise to the practice of their destruction, which was done either by drowning or consigning the victims to the flames, hoping thus to diminish or exterminate the progeny of the devil.

The barbarisms of the Greeks and Romans were executed on such unfortunate children as the parents or neighbors pleased to call "monsters." This opinion and practice received the sanction and support of the most learned of that day. As recently as the beginning of the seventeenth century, Riolanus*, one of the most distinguished men of his age, gravely tells us that children with six fingers,

* Riolanus; *Au Romanorum præcepts monstra interfici deluant.* Paris, 1605.

giants, dwarfs, &c., who are made after the image of the devil, *may* be allowed to live, but should be removed from the sight of the public, and perpetually shut up in some chamber or place of security.

The rudiments of this superstition still exist. Even at the present time, there is a strong popular opinion participated in by not a few persons of intelligence; but, as far as I am aware, having no advocates in the medical profession that not only justifies, but almost demands it as a duty of the accoucheur to destroy the life of the most unnatural monsters, either by suffocation or the employment of anesthetics.

It is amusing no less than humiliating to examine some of the older treatises on monsters, in which are to be found, seriously and carefully described and figured, cases of monstrosity which never could, by any possibility, have existed. They have no analogue or archetype in nature—being unlike all else in heaven above or on the earth beneath—

> * * * "all prodigious things
> Abominable, unutterable, and worse
> Than fables yet have feign'd or fear conceiv'd,
> Gorgons, and Hydras, and chimeras dire."

Dr. Montgomery* remarks: "In that age of refinement when Cicero captivated the crowded forum by his eloquence, and by his writings sought to instil a more enlightened philosophy through all mankind, each monstrosity was regarded as the special harbinger of some approaching calamity, and hence their name derived from the verb *monstrare*. Lycosthenes went so far as to add to the description of each monster the picture of the misfortune which was to be its sequel."

With the beginning of the sixteenth century, the subject of monsters began to receive greater attention, yet very little knowledge of them was possessed by those who attempted to write on the subject. The illustrations consisted of grotesque figures delineated from old traditions and narratives, which productions of fancy were believed with childish simplicity.

In the seventeenth century the same stand-point continued, except that many observations and delineations were added which were true to nature. As Colombo in the sixteenth, so Bartholinus in the seventeenth century was an exception to most authors, as he confined his attention to the consideration of actual cases of genuine monsters, and entirely ignored the traditions of apochryphal writers. The

* "Account of a very remarkable Double Monster; with observations on the subject of Double Monstrosity." By W. F. Montgomery, M. D., Dublin Quarterly Journal of Medical Science. Vol. XV, p. 257, 1853.

authority of the old authors was not, however, entirely undermined until the early part of the eighteenth century, when a careful observation of the structure and anatomical peculiarities of monsters was instituted in place of mere superficial examination and description of their external configuration. This advance in the knowledge of structure gave rise to a corresponding improvement in the theories of development, which partook of a more rational, if not a scientific character.

In the several editions of the celebrated treatise of Leicetus, on *Monsters, are to be seen numerous engravings of the various forms of single and double monsters of the unnatural and unreal types above alluded to, all of which are carefully described, with references to authors, dates, places, &c., with few, if any, doubts of their genuineness or accuracy either expressed or implied.

This which was the first large work on monsters, is however a mere compilation from preceding authors, and is utterly destitute of learning and discrimination. It is written in the spirit of Lycosthenes, whose work published A. D. 1557, is extensively quoted. Lycosthenes collected with great labor and zeal, accounts of all the monsters which could be obtained, both fabulous and genuine, from the beginning of the world to his own time.

Thus Leicetus, the first edition of whose work was printed in 1616, collected a great number of the most fabulous monsters, which are alternated with isolated delineations true to nature. The author gives no original observations, the third edition, however, has an appendix by Palfyn, which contains some cases that are probably authentic and hence possesses more intrinsic value.

All the early treatises on this subject are characterized by the extreme credulity of the authors, who recorded the most absurd and improbable cases, and the grossest errors, as well as some rational observations and interesting facts.

It is very evident, however, that these authors did not intend to deceive their readers, their works were written in a pure and devout spirit, as is exemplified in the preface of the work under consideration. Leicetus reverently writes: "I pray God to accompany this work with his benediction, and all who may read it. Amen." The christian spirit is yet more fully shown in the "conclusion" of the book, which I give the reader in literal translation:

"The above is what we had to say concerning the natural constitution of human monsters, and also concerning the causes of monsters,

*Leicetus, De Monstris, 1616. The fifth and last edition was published in Leyden, 1708, in the French language, with additions, &c., by J. Palfyn and Mauriceau, small quarto, many plates.

Fig. 1

Fig. 2

Fig. 3

their nature and differences. In which if we have said anything which the Holy Church of Rome does not approve, neither do we approve it, and wish it to be considered as never having been written. But if we have advanced anything which persons of learning and worth find to be in accordance with truth, I pray them to render therefor unto God, the giver of every good gift, all honor and glory, world without end."

Doubtless many of the figures in the works of Licetus and others of that period, were made from mere descriptions by different writers, who made up their accounts from popular report, hence exaggerated, superstitious, and marvelous reports and traditions, in which fanciful resemblances to imps, demons, and other phantoms of their brains were freely indulged in, and glowingly portrayed. Such stories having passed through several editions at last gained credence and were regarded as authentic.

As an example, Licetus [op. cit. 3d ed. p. 96,] quotes the following description from Lycosthenes, who, he says, "relates that in the beautiful and superb suburbs of Antioch there was born in the time of Constantius, this horrible monster which is here presented to you, it was a child with two mouths, double rows of teeth, four eyes, and two very small ears."

So far as the description goes it is perfectly correct, without doubt, as it corresponds precisely with recent cases given in the present monograph, under the name *Diprosopus tetrophthalmus*. Licetus "presents" this "child" in the full length portrait of a large man, [see *fac-simile*, fig. 1,] with a heavy beard, a single head and face, which, so to speak, is two stories high, having two sets of eyes, one pair directly over the other, also two mouths, an upper and lower, &c. This figure was evidently made from a mere description, as no such arrangement of the facial organs, has ever been seen in modern times, neither is to be found in any authentic work, and I can safely venture to predict, that such an arrangement will never be seen in future, either in man or the lower animals, as it is quite contrary to the laws of development.

In the cases where four eyes, two mouths, and only two ears occur, the eyes are placed in a single row, having a common horizontal axis, which is also the case with the mouths, being right and left, instead of upper and lower.

From this example we are led to conclude, that many of the descriptions and figures of the old authors, apparently of the most fabulous and absurd character, are when carefully studied in the light of modern science, discovered to be founded on misapprehended facts.

All the illustrations of Licetus, and his contemporaries, represent children and even fœtuses as full grown, and in some instances as quite aged men and women.

In the older works will be found accounts and figures of single and double monsters of a mixed character, being composed of human and animal bodies; for example, * the body of a hog, with the head and neck of a man; a lion's body and a human head; one in which the upper half of the body is that of a man, the lower being of a dog, with his long hairy tail; and even figures of the well-formed body of a man, in one case surmounted with the head of a goose! and in another the head of an elephant with proboscis and tusks well developed!! Nothing can be more absurd than the idea of any progeny whatever resulting from intercourse between man and the lower animals, or among animals of widely different genera. There is, however, a popular opinion yet extant, which gives credence to such an hypothesis.

Modern scientific research, in this as in other instances, adds confirmatory evidence to the correctness of the biblical records. The *law* of generation announced at the creation, as recorded in the first chapter of Genesis, applies equally to the animal and vegetable kingdoms. The grass, the herb, the fruit tree, the beasts, the cattle, every winged fowl, and everything that creepeth upon the earth, having been made, each "*after his kind.*" "God saw everything he had made, and behold it was very good." This primitive law of specific generation is unalterable and without exception. Were it otherwise, as my friend Dr. Blatchford has remarked,† we might truly say in the language of the epicurean poet Lucretius, whose writings are antecedent to those of Virgil:

> "Thence would arise
> Vast monsters, nature's great absurdities;
> Something half beast, half man, and some would grow
> Tall trees above, and animals below;
> Some joined of fish and beast, and everywhere
> Frightful chimeras breathing flames appear.
> But since we see no such, and things arise
> From certain seeds of certain shape and size,
> And *keep their kind* as they increase and grow,
> There's some *fix'd reason* why it should be so."

The following examples are copied and translated to illustrate the adsurd notions of the old writers regarding double monsters, as well as to exhibit their quaint style of description:

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*Vide Licetus, op. cit. for all the examples given.

†"Observations on Equivocal Generation, prepared as evidence in a suit for slander. By Thomas W. Blatchford, M. D.," Vide Trans. N. Y. S. Med. Soc. vol. VI, pp. 22—34, A. D. 1844, in which the question is discussed, "Is it possible for a woman to become pregnant by a dog, and to bring forth pups or any other issue, as a result of such unnatural intercourse?"

*"Lycosthenes says, that in Albania, a woman of low condition, gave birth to a monster with two bodies joined together, the heads turned in opposite directions, the one from the other, the first head resembling perfectly that of a man, who had all his limbs; the hinder one was a dog's head, accompanied in like manner with its body and all its limbs." The engraving of this and the following case are from Licetus. [Fig. 5.]

†"Gauthier, relates on the authority of Ruel, that towards the end of the reign of Lothaire, A. D. 854, who was before that Duke of Saxony, a young woman brought forth a man-dog-monster, the bodies of which were very closely joined together by the spine of the back." [Fig. 4.]

The LXXXIX chapter, of Licetus, "De Monstris," contains the following, among other cases, under the caption: "In which it is shown that there really are monsters that resemble the Devil."

"Finally some authors inform us that monsters have been known to exist, of so horrible a nature, that they had but the shape and appearance of a demon. For Corneille Gemma, as well as Riolan, assures us that at Bois le Duc, a city of Brabant, a woman gave birth to a monster which resembled a devil. Gauthier and Ruel relate that a child born of most worthy parents, was perfectly infamous, and that the sight of it could only excite feelings of execration and dread; its eyes were bright and sparkling, it had the mouth and nostrils of an ox, horns rising from its head, the body shaggy like that of a dog: faces, resembling that of an ape, covered those places which should have been occupied by the breasts; cats eyes were there, so to speak, attached to its hypochondria below the navel; frightful grinning dogs' heads were at the elbows, both looking down upon the fleshy portion of the legs; its feet were like those of a swan; behind it was a tail, half a yard long, which became curved as it rose upward; it lived four hours after its birth."

"Munster, Cardan, and Rueff attest that some time afterwards there was born at Cracow a monster very similar to the one just described.

"This was a child, which, instead of a nose had an elephant's trunk, its eyes were round, and it had wings growing at their sides; its ears were like those of an ass; it had two additional eyes above its navel, a rat's tail, but this was split in two parts, and so long that it rose above its head; each hand had but four fingers, and each foot but four toes, exactly like those of a sparrow-hawk's claw, but three of these toes were joined together by a membrane like that seen in the

*Licetus, op. cit. 3d ed. chap. LVIII, p. 195. †Op. cit. p. 296.

foot of a goose; under the arm-pits, at the elbows, on the inside and above its knees there arose (at each of the places mentioned,) a dog's head, so that it had six. We are told that it lived three hours. [Fig. 2.]

*Licetus quotes the following from Lycosthenes:

"A monster was fished up in the Tiber at Rome, in the year of our Lord MCDXCVI. It was a human body, with the head of an ass, one of its hands was like that of a man, and the other was like the foot of an elephant; one of its feet was like that of an eagle, and the other like that of an ox; it had the belly of a woman, fine round breasts, and the entire body was covered with scales, except the belly and the breast; projecting from behind was seen a barbed head, resembling that of an old man, and another like that of a dragon, which vomited flames." [Fig. 3.]

Figures 2 and 3 are *fac similes* from Licetus. The imps and dragons to be seen between the two figures are not referred to by the author, and are probably to be regarded as mere artistic embellishments, in harmony with the main character of this monstrous group. I have retained them to illustrate the spirit of the age in which they appeared.

There are several cases of double human monsters referred to by different historians which in this connection require a passing notice.

The following account is given in William of Malmesbury's "Chronicles of the Kings of England," Bohn's edition, p. 235. I am not aware that the case is referred to in any work on monsters, and possess no corroborative evidence of its existence.

"At that time, (A. D. 1065,) on the confines of Brittany and Normandy, a prodigy was seen in one, or more properly speaking, in two women; there were two heads, four arms, and every other part twofold to the navel; beneath were two legs, two feet, and all other parts single. While one was laughing, eating or speaking, the other would cry, fast, or remain silent; though both mouths ate, yet the excrement was discharged by only one passage. At last, one dying, the other survived, and the living carried about the dead, for the space of three years, till she died also, through the fatigue of the weight, and the stench of the dead carcass."

While it may be admitted that such a monster could have lived, the case being very similar to that of the celebrated and well known Ritta-Christina, of whom more will hereafter be said, the statement that one of the individual portions survived the other three years, or even three hours, cannot for a moment be entertained, as it is quite contrary to reason and experience. It may be laid down as an almost invariable rule, if not a law, governing the death of double monsters, that the individuals expire nearly at the same moment.

Op. cit., p. 278.

Fig. 4.

Fig. 5.

The oft-quoted case of the double-headed man, mentioned by Buchanan* will be found in that portion of this monograph which is devoted to Bicephalous monsters.

There is a reference in Beck's Medical Jurisprudence, to Piscottie's History of Scotland, p. 160, in which a double monster is said to be mentioned. I have not seen this work, but think it quite probable that it is the same described by Buchanan.

In concluding the fabulous portion of the history of monsters, I will not omit mentioning that quite recently a distinguished novelist has selected a double monster as the principal character of one of his romances.

M. Jules Janin, said to be one of the most popular caterers to the amusement of the French reading public, in the year 1838 composed a novel with the title "*One heart for two Loves*," the heroine or heroines of which are two beautiful girls, joined together by a fleshy band, projecting from the side of each, not unlike the bond of union of the Siamese brothers. They were baptized and christened Louisa and Anna. The author gives marvellous accounts of the various tastes, dispositions and mental endowments of the united sisters, how they felt distinctly yet jointly, and how being two, they were one. By this double identity their progress in knowledge, he states was superhuman. The book, in short, is full of wild and poetical fancies, which, however, have not the slightest foundation in fact, so far as they relate to the mental constitution and peculiarities of double monsters.† This double monster, or double-angel novel probably had its origin in the general interest which was excited at that time in France, by the frequent and extensive discussions of the subject of monsters in the Academy of Natural Sciences at Paris; and also from the appearance at that date of the great works of Isadore Geoffroy St. Hilaire, and M. Serres.

II. *Positive or Transitional Period.*

The second period in the history of teratology, is denominated by Is. Geoff. St. Hilaire the *positive*, in contradistinction to the fabulous on the one hand, and the scientific on the other. The term transitional is perhaps preferable, the word positive should be restricted to that which is established, or determined beyond controversy, and therefore eminently applies to science in a strict sense, which is merely the exact and complete comprehension of well ascertained facts in all their relations.

The transitional period embraces the first half of the eighteenth century.

* G. Buchanan "Rerum Scoticarum Historia," Aberdeen 1762, Lib. xiii, cap. vii, p. 362.

† For a review of this curious novel, see Blackwood's Magazine, vol. XLIII, p. 208, Am. ed.

During this period the subject began to be regarded in the light of a science. It was cultivated with zeal by a considerable number of intelligent observers who aimed to divest it of the mystery and superstition in which it had been so many years enveloped. However it must be admitted that during most of this period it was still regarded as a matter of curiosity, more than one of philosophical inquiry.

The period under consideration, comprising scarcely fifty years, was marked by very great progress. One of the most formidable obstacles to the advancement of science, and which perhaps in some degree continues to retard philosophical progress, has ever been a blind submission to authority. In every age a few master minds, independent thinkers and writers, have made themselves controlling spirits; and by a dogmatic assumption of authority became established, and continued, unquestioned, in some instances for generations, before their fallacies have been overthrown and succeeded by others, perchance, nearly, if not quite as valueless. To untrammel the mind from the influence of mere authority, that it may have free scope in the investigation of facts and laws which exist and are established in nature, is the grand antecedent necessary to scientific discovery and permanent progress. To the members of the French Academy of Sciences,* of whom Méry, Duverney, Winslow, Lémery, and Littre should be particularly mentioned, teratology is chiefly due for its advancement during the transition period. In the works of these celebrated authors may be found a large number of interesting and valuable facts, which were correctly observed, accurately described, and accompanied by rational and judicious remarks.

These great men questioned and finally undermined the authority of the old writers, by violently and successfully attacking their ancient and superstitious prejudices.

The flimsy and supernatural explanations which had been entertained during the long lapse of time, comprised in the preceding period, were in the present substituted by plausible hypotheses, and in some instances by scientific theories. They bestowed particular attention to the causes or genesis of monstrosity. The text of this period, which was constantly kept before the minds of all who were interested in the subject, was expressed in the question, "Whether monstrosity be original or acquired?" A protracted and able controversy was carried on concerning this question between Lémery and Winslow, who were the principal champions in the discussion. The former maintained that monstrosities are only vices of conformation, the result of abnormal development of the embryo—

*Vide Memoirs de l'Academy des Scienc. Paris, 1724–1743.

while the latter contended that the germs were originally defective or monstrous.—which view of the subject became the generally received theory of the age.

This interesting physiological discussion was continued with enthusiastic ardor for nearly twenty years (from 1724 to 1743), and only terminated by the death of Lémery.

The question of original or acquired monstrosity engaged the attention of all the principal anatomists and physiologists of the age. Haller, and numerous authors of less celebrity, wrote more or less extensively on the subject; every argument that could be derived from the knowledge of those days, was arrayed by the disputants; in fact, for that period, the subject was discussed exhaustively.

In its appropriate place, the comparative merits of the question involved in this discussion will be fully canvassed. The subject is here introduced merely in its historical relations.

It would not be profitable to pursue the history of this period farther in this place, as reference will hereafter be made to the facts and observations elicited by those who devoted themselves to teratological inquiries at this time.

III. *The Scientific Period.*

The third period in the history of teratology extends from the middle of the eighteenth century to the present time, and has been very appropriately denominated the *scientific* period. It is characterized by an entire freedom from the fabulous and superstitious notions of the first, and the almost endless discussions of mere hypothetical and theoretical doctrines, by enthusiastic partisans, of the second.

The scientific period is established on anatomical and embryological researches, by which method alone, the relations of abnormal to normal development can be profitably pursued and rendered apparent.

Morgagni, and the distinguished academicians above referred to, had by their combined labors already corrected many erroneous doctrines, and proposed more rational explanations respecting the nature and origin of abnormal and monstrous formations. The distinguished honor of elevating the subject to a science, is due to the genius and indefatigable labors of Albrecht von Haller. To this eminent man physiological medicine is greatly indebted for the rapid advancement and impetus which it received at his hands.

Haller laid the foundation stone of teratology in his celebrated work "*De Monstris*," in which he assembled together the isolated facts relating to the subject, which were recorded in the works of his predecessors and cotemporaries. The materials thus collected

were subjected to the scrutiny of his analytical mind. He expunged or rendered doubtful those statements or cases which were inconsistent with the advanced state of knowledge, while from the remaining facts he deduced many conclusions, which gave to the subject the character of a distinct branch of science, and established the basis of future progress.

So thoroughly had Haller treated the subject, his pupils and followers were content for many years to walk in the steps of their great master, in consequence of which the science received very unimportant additions, either in the discovery of facts, the deduction of new principles, or even in the elucidation or confirmation of those already propounded.

Teratology remained nearly at the same standpoint to which Haller had brought it until Bichat—that wonderful young man, who died at the age of thirty-one years (A. D. 1802)—first undertook a systematic analysis to reduce the complex structures of the body to their elementary tissues, and to ascertain the peculiar properties which characterize each simple tissue, and thus to establish a new species of anatomy—histology—and a new era in that branch of science. He was the founder of philosophical and analytical anatomy. He instituted the school of minute and laborious research, extensive and elaborate experiment, by which the essence of organic forms, and the laws by which these forms are invariably directed have thus far, and will alone in future be discovered and demonstrated.

Comparative anatomy was brought to the aid of general and descriptive anatomy. The maturely and normally developed human body was compared with the embryo ; the various species of organized beings and their embryos were compared with man, and as a result we became acquainted, on the one hand, with the intimate structure, composition and science of the human body, and on the other, with the general facts, plan, and unity of animal organization, including all its multiform genera and species, in every age. On these comprehensive views a new theory of anomalies and monstrosities was founded, viz: that of *arrest and retardation of development*, which is now found to explain many varieties of monstrosity, but more particularly those which should be regarded as vices of conformation, as, for example, cleft formations, deficiencies, or absence of parts, &c. This theory is, however, inadequate to account for those monstrosities which may be grouped under the general head of duplex formations, as they contain more than belongs to a single individual.

From the time of Bichat the science of teratology became intimately associated with the anatomy of development, or, more strictly

speaking, embryology. By a careful study of the laws of development, and the order in which the various organs are evolved in the embryo, it has been observed that monsters by defect or arrest of development, are, to a certain extent, permanent embryos. The abnormal organs merely represent the primitive condition of formation as it existed in an early stage of embryonic or fœtal life. The series of phenomena observed in the progressive stages of embryonic development, is similar to a series of organisms in the great scale of animal life. The embryo of different animals resemble each other very strikingly when examined in the earlier stages of their growth.

"During almost the whole period of embryonic life," says that profound modern naturalist, Prof. Agassiz,* "the young fish, and the young frog, scarcely differ at all, and so it is also with the young snake compared with the embryo bird. The embryo of the crab again, is scarcely to be distinguished from that of the insect; and if we go still further back in the history of development we come to a period when no appreciable difference whatever is to be discovered between the embryos of the various departments of the animal kingdom."

It is a remarkable fact that many of the numerous species of extinct animals, the remains of which are buried in the crust of the earth, and which are so unlike those of the present period, are found in general to bear a striking analogy to the embryonic forms of existing species. Thus we are enabled to detect the law of *unity of type* which is indicated in the formation of all the divisions of the animal kingdom.

The relations of teratology to embryology, philosophical anatomy, and zoology in general, including all the laws of animal organization, are thus rendered apparent, and furnish additional evidence of the harmonious correlation of the sciences.

Among the host of naturalists, who have enriched the science of teratology by their researches and contributions to its literature, may be mentioned after Haller and Bichat, Geoffroy St. Hilaire, (father and son,) Serres, Fred. Meckel, Tiediman, Vrolik, Bischoff, Allan Thompson, Förster, Panum, and lastly Dareste and Laraboulet.

Others are worthy of mention, whose names will be frequently referred to in the following pages, and a list of whose works is comprised in the bibliographical table.

Such is a brief and imperfect sketch of the history of teratology, which could have been greatly extended had the limits of this essay admitted of farther amplification. In other portions of the work, many facts of a historical character will be necessarily introduced, which will in a measure compensate for present omissions.

* "Principles of Zoology," Agassiz and Gould. Part 1, p. 154.

Chronological Bibliographical Table of Diploteratology.

The present chronological list of writers and treatises comprises nearly twice the number of references that are to be found in the tables of Vrolik, Förster, or any other work on the subject with which I am acquainted. As far as the character of the works are known, none have been admitted into this list that do not, more or less, relate to double monsters or duplex formation. It is therefore, in a strict sense, the literature of Diploteratology. The table could have been extended beyond its present limits, by introducing the titles of medical journals and transactions, containing one or more cases, or brief essays on the subject. Such additions would not have enhanced the value of the catalogue, and have been rendered entirely unnecessary, inasmuch as all minor references are made in their appropriate places throughout the work.* The literature of the subject previous to the sixteenth century is embraced in works of a general character, similar to those of Alistotle, and Pliny, and therefore the table does not extend further back than the middle of that century.

SIXTEENTH CENTURY.

1549. *J. Affaitat.* De Hermaphroditis. *Venet.* 1549.

1554. *Jacob Rueffus.* De conceptu et generatione hominis, Etc. *Tigurin*, [*Zurich*] 1554, 4to., *Frankfort*, 1580, Liber V. Cap. III.

Figures and very brief descriptions of about thirty monsters. pp. 42–45, monstra diploa. It also contains some fabulous and fanciful pictures, and numerous monsters with double arms, legs, &c. It is a curious little book printed in German, except Liber V. which is in Latin.

1556–1567. *Jobus Fincelius.* Wunderzeichen, [Wonder-signs.] 1 Bd. *Jena*, 1556.

Two editions were published at Frankfort, in 3 vols. viz: one in 1566, the other in 1567. It treats of many monsters, mostly fabulous however, and hence of little value.

1557. *C. Lycosthenes.* Prodigiorum ac ostentorum chronicon quae praeter naturae ordinem, modum et operationem et in superioribus et his inferioribus mundi regionibus, ab exordio mundi usque ad haec nostra tempora acciderunt. Quod portentorum genus non temere evenire solet, sed humano generi exhibitum, severitatum iramque, Dei adversus scelera, atque magnas in mundo vicissitudines portendit.

* The bibliography of Hermaphroditism is but partially given in the following list: for a very complete catalogue of the literature of this subject the reader is referred to the admirable essay on the subject by Prof. Simpson of Edinburgh, in his "Obstetric Memoirs and Contributions." Second series, p. 326. Phila. 1856.

Partium ex probatis fideque dignis authoribus graecis atque latinis; partim etiam ex multorum annorum propria observatione, summa fide, studio ac sedulitate, adjectis etiam omnium rerum veris imaginibus, *Basileae* per Henricum Petri, 1557.

Historically this is a very interesting work, in which all the wonders of heaven and earth, from the begining of the world are mentioned, and illustrated with wood cuts. This collection of wonders contains many monsters, most of which are fabulous, with occasional figures and descriptions of genuine cases

1559. *Columbus.* [Columbo.] De re Anatomica, Libri, XV. *Venet,* 1559. folio.

This work contains accounts of many monsters, and malformations of different parts and organs of the body—as of muscles, arteries, bones, &c.

1570, *Sorbinus.* Tractatus de Monstris. *Paris,* 1570.

1573. *Ambrosius Paræus.* [Pare.] Deux livres de Chirurgie. I. De la géneration de l'homme. II. Des Monstres tant terrestres que marins, avec leurs portraits. *Paris,* 1573, 8vo.

1575. ——— ——— Les œuvres de M. Ambroise Parè. *Paris,* 1575, Folio: also an edition in folio, *Paris,* 1582, Lib. 24. De Monstris et Prodigiis.

This work is of the same character as that of Lycosthenes. The most fabulous cases and delineations alternate with those which are true to nature. Most of the cases are taken from preceding authors, with a few original observations.

1581. *Laevin. Lemnius.* De Miraculis occultis Naturae. Libri IV. *Antwerpiae,* 1581.

This work treats of generation, development and malformation, and is not characterized by either learning or discrimination.

1584. *C. J. Brechtii.* *διδομοραφια.* Diatribe de vita gemellorum a thorace umbilico-tenus coalitorum. *Argentorati,* 1584, 8vo.

1584. *Irenæus.* De monstris. 1584.

1588. *Marcello Donato.* De Medica Historia Mirabili. Libri Sexti, cap. II. p. 297. Monstra admiranda. *Venetiis,* 1588.

1594. *Jacobum Singen.* Vier seltsame und erschreckliche Wunder und Misgeburten, 1594, 4to.

1595. *Mart. Weinrichius.* De ortu monstrorum comm. *Bresleau,* 1595, 8vo.

It is of the same character of previous works. The origin of monsters is accounted for in a superstitious and fanciful manner.

1600. *Osten.* Dissert. de Natura, Gener. et causs. monstror. *Wittenberg*, 1600.

SEVENTEENTH CENTURY.

1605. *J. Riolanus.* De monstro lutetiano, etc. *Paris*, 1605, 1 pl. 8 vo.

This work consists of a description of a Dicephalous monster, with general observations on monstrosities.

1609. *J. G. Schenkius, a Graefenburg, fil.* Memorabilis, monstrosa humanorum partuum miracula, stupendis conformationem formulis ab utero materno enata, vivis exemplis, observationibus et picturis referens. Accessit analogicum argumentum de monstris brutis, supplementi loco ad observationes medicas Schenkianas. *Francofurti*, 1609.

Cases from Lycosthenes, Paré and other authors of the sixteenth century, with some original observations, as well as those of the medical friends of the author. It is no improvement on the work of Lycosthenes.

1614. *Bauhinus.* De Hermaphr. monstrorumque part. *Openheim*, 1614.

1616. *Licetus.* De monstris, 1616, second edition, *Padua*, 1634, third edition *Amstelodami*, 1665, fourth edition in French with additions by Palfyn. *Leyden*, 1708.

This is the first large work on monsters. It is in the spirit of Lycosthenes. A great number of the most fabulous monsters alternate with isolated cases true to nature. It contains no original observations of value. The appendix to the last editions contains some reliable cases, by Palfyn and others, which much increases its value.

1642. *Ulissis Aldrovandi.* Monstrorum historia. *Brononiae*, 1642, folio.

Among many wonders, fabulous monsters, races, &c., in the spirit and from the works of Lycosthenes, and other writers of that class, there are many good cases of human and animal monsters, and particularly of double monsters.

1644. *Car. Phil. Lombardius.* Exercitatio anatomica de monstro humano nupero. *Marburgi Cattorum*, 1644, 4to.

1645. *Thom. Bartholinus.* De monstris in natura et medicina. *Basil*, 1645.

———— Historiarum Anatomicarum Rariorum, Centuriae, VI. *Hafn*, 1654–1661.

The works of Thomas Bartholine contain some good original observations on monsters.

1647. *Strengelius.* Soc. Jes. Theol. De monstris et monstrosis,

quam mirabilis, bonus et justus in mundo administrando sit Deus monstrantibus. *Ingolstadt*, 1647–8.

A theological dissertation concerning the moral signification of monsters. It is a historical curiosity, intended only for general readers.

1649. *J. H. Graetz.* Disputatio physico-medica de monstroso abortu Dessaviensi. *Servestae*, 1649.

1651. *W. Harvey.* Exercit. de Generatione Animalium. *London*, 1651.

This work contains many good observations on malformations.

1652. *Riolanus.* Opuscula Anatomica varia et nova. *Paris*, 1652, 12 mo.

1658. *Eichstadius.* Diss. de Generatione imperf. et monstra. *Gedani*, 1658.

1667. *Casparis Schotti.* Physica Curiosa, s. mirabilia naturae et artis. *Herbipoli*, 1667. Lib. V. Mirabilibus monstrorum.

This work possesses no merit, the pictures are copied from Lycosthenes.

1669. *Blondel.* An monstra formatricis peccata. *Paris*, 1669.

1670. Acta Academiæ Leopoldo—Carolinæ.

This work, subsequent to the date cited, is a rich source of information on monsters in general.

1671. *Welsch.* La Commare del Scipione Mercurio. Kindesmutter—oder Hebammenbuch von G. Welsch. *Wittenberg*, 1671. II. Cap. 34–37.

It is said to be entirely senseless.

1672. *Joh. C. Brunner.* Dissertatione Inaugural. de Monstro Bicipite. *Strasbourg*, 1672. 4to.

1672. *Th. Kerckring.* Specilegium anatomicum continens observationem anatomicarum rariosum centuriam unam nec non osteogeniam foetuum. *Amstelodami*, 1672.

1674. *Fortunatus Fidelis.* De relationibus medicor. Libri VI. *Leipzig.* 1674.

1677. *G. Blasius.* Observationes medicæ. *Amstelodami*, 1677.

1679. *Schmuck.* Fasciculus admirandorum naturæ, oder der spielenden Natur Kunstwerke, in verschiedenen misgeburthen vorgestellt, durch Fr. W. Schmucken, Kunsthändlern. *Strassburg*, 1679.

It contains some good delineations of double monsters.

1680. *Blankaard.* Holland's Jaarregister. *Amsterdam*, 1680.

1684. *Valentinus.* De Monstrorum Hassiacorum ortu atque origine. *Marburgii Cattorum*, 1684.

1684. *Dorsten.* Dissertatione de monstro human. nuper, *Marbourg*, 1684.

1691. *Franciscus ab Honufriis.* Abortus Bicorporeus Monocephalus. *Romae.* 1691, 4 to.

1700. *J. C. Grimm.* Kurze relation einiger Wunderdinge in der Natur, bes v. e. monstro bicorporeo. *Leipzig*, 1700. 1 Pl.

EIGHTEENTH CENTURY.

1706. *Bidloo.* Descriptio monstri bicipitis humani, in Act. eruditorum. *Anni*, 1706, p. 30.

1706. *Duverney.* Observ. sur deux enfans joints ensemble, Mem. de l'Acad. des Sci. *Paris*, 1706.

1707. *Werther.* Dissertatio de Monstro Hungarico. *Leipzig*, 1707.

1707. *Etmuller.* Dissertatio de Monstro Hungarico. *Leipzig*, 1707.

1708. *J. Palfyn.* Description anatomique des partes de la femme, qui servent à la génération, avec un traité des monstres, de leur causes, de leur nature, et de leurs differences; et une description anatomique de la disposition surprenante de quelques parties externes et internes de deux enfans nés dans la ville de Gand. A. *Leiden*, 1708.

1709. *Eccard.* De sororibus gemellis, cohærent. ———, 1709. Quarto, 2 fig.

1716. *Karpzow.* Kattologia d. i. kurze Katzenhistorie. *Leipzig*, 1716.

1724. *Lemery.* Mem. de l'Academ. des Sciences. *Paris*, 1724, 1738, 1740.

General theoretical considerations in relation to the origin of monsters.

1724. *Joan. Adamus Kulmus.* Descriptio anatomico-physiologica alicujus Fœtus Monstrosi, etc. *Gedani*, 1724, 4to.

This small work contains a description of a double monster (Sternopagus), illustrated with several plates.

1733. *Taxon.* De Monstris Comment. literar. *Norimb.* 1733.

1733. *Winslow.* Mem. de l'Academ. des Sciences. *Paris*, 1733, 1734, 1740, 1742, 1743.

The greater part of these essays are on the genesis of monsters; however, they are chiefly polemic against Lemery.

1738. *Martinius.* Epist. de Monstr. generat. *Venedig*, 1738.

1739. *N. Tulpius.* Observationes Medicae. Editio sexta. *Lugd. Batc.*, 1739.

1730. *Alberti Haller.* Descriptio Fœtus Bicipitis ad pectora connati ubi in causas monstrum. Cum figuris. *Hannoverœ*, 1739. 4to 8 pl.

1740. *Superville.* Philosophical Transactions. *London*, 1740.
1740. *Hunauld.* Mem. de l'Acad. des Scien. *Paris*, 1740.
1741. *Bianchi.* De Generat. histor. *Turin*, 1741.
1743. *Buchwald.* Hist. Monstri gemelli coaliti. 1743. 2 fig.
1748. ——— Storia de Monstri di 2-corpi. *Turin*, 1748. II Pl.
1748. *Huber.* Observationes atque cogitationes nonnullae de Monstris. *Cassel*, 1748.
1748. *Cosme Viadel.* Observationes sur la practique des accouchemens. *Paris*, 1748.
1749. *Jani Planci.* Epistola de Monstris et Monstrosis quibusdam. *Venetiis*, 1749.

This work contains three plates. It treats of malformations in plants and the lower animals ; the monstrosities of the human subject are scarcely referred to.

1749. *Luigi Stampini.* Descrizione d'un feto umano. *In Roma*, 1749.
1749. *Bianchi.* Storia del monstro di duo corpi. *Turin* 1749 4to.
1749. *E. A. Nicolai.* Gedanken von der Erzeugung der Missgeburten und Monskalber. *Halle*, 1749, 8 vo.

Theoretical considerations, descriptions and figures of an Ischiopagus, and a Synkephalus monster.

1751. *Torkos.* Observ. Anat. Medic. de Monstro. bicorporeo virgineo, anno 1751. In luceum editio atque anno 1787. Phil. Trans. vol. 50, p. 311. *London.*
1751. *G. Christell.* Dissertatio de partu gemellorum coalitiorum. *Strasbourg*, 1751. [*Argentorati*, 1751.]
1752. *P. A. Boehmer.* Observatio quarta de monstro humano bicorporeo in observationem Anatomicarum Rariorum, fasciculo, p. 50. *Halæ Magdebergicæ*, 1752.
1754. *B. Albinus.* Academicæ annotationes. *Leidæ*, 1754.
1754. *Roederer.* Commentar. Soc. Scient. *Gœtting*, 1754.
1755. *Sigwart.* Tripes haiterbacensis. *Tubingæ*, 1755.
1757. *Wagner.* In Frank'sche Sammlung von Aumerk, aus der Naturlehre. *Nurnberg*, 1757. B. II.
1758. *P. Sannie.* Beschrijving eener verlossing van tweelingen, die met het bovendeel hunner hoofden waren aaneengegroeijing, in de Verhandelingen der Haarlemsche Maatschappij, IV, D., Anno 1758, p. 376.
1759. *C. T. Wolff.* Theoria Generationis. *Halæ*, 1759.

This is the first important theoretical work on monsters which appeared in this century, after the writings of Lemery and Winslow.

1762. *Curtius.* De Monstro human. c. inf. gemello, 1762.

1765. *G. Van Doeveren.* Specimen observationem academicarum ad monstrum historiam, anatomen pathalogicam et artem obstetriciam præcipue spectantium. *Groningæ et Lugduni Batavorum*, 1765.

This is a valuable treatise.

1765. *Zimmermann.* De Notandis circa naturæ lusus in machina humana. *Rintelii*, 1765.

1767. *J. T. Klinkosch.* Programma quo anatomicam monstri bicorporei monocephali descriptionem proponit cum tabulis figurarum, nec non sectiones et demonstrationes suas anatomicus publicas hyemales, anni academici 1767, 6 pl., indicit *Vetero Pragæ.*

1767. *D. E. E. Berdot.* Observatis prima Fœtus biceps, in Actis Helvet. physico, mathem., anatom., botanic, medicis. Vol. VI. *Basileæ.* 1767, p. 179 et seq.

1768. *Alberti von Haller.* De Monstris, operum anatomici argumenti minorum. Tomus tertius. *Lausannæ*, 1768.

This contains all the former labors and investigations of Haller on monsters during the years 1735, 1742, 1745, 1751 and 1753. This is truly the first work that is justly entitled to be regarded as scientific, on monsters in general, that had appeared up to this period. It contains the literature complete, as well as descriptions and delineations of particular cases.

1768. *Büttner.* In vielen Jahren gesammlete anatomische Wahrnehmungen. *Konigsberg*, u. *Leipzig*, 1768.

1767. *Sigwart.* Dissertatio sistens gemmellorum concretorum historiam. *Tubingae*, 1769.

1770. *J. B. Hullesheim.* Gemellarum infantum abdominibus connatarum, brevis historia. *Zwollæ*, 1770.

1772. *Insfeldt.* De lusibus naturæ. *Leyden*, 1772.

1772. *Heerwig.* Wahre Beschreibung zweier aneinander gewachsener Kinder. *Leipzig*, 1772.

1773. *Sauval.* Histoire et recherches d'es antiquités de Paris. Tom. II, p. 564. *Paris*, 1773.

1773. *C. T. Wolff.* Nov. Commentarii Acad. Scient. Imp. Petropolit. Tom. XVII, pro anno 1772. *Petropolit*, 1773, p. 549. De ortu Monstrorum.

This is a work of great value, being a continuation of his theoretical views enunciated in previous works.

1775. *J. G. Walter.* De monstro bicorpori, duobus capitibus, quatuor brachiis, tribus pedibus, pectore pelvique concreto. In J. G. Walteri Observationibus Anatomicis. *Berolini*, 1775, folio 11, plates.

1775. *Regnault.* Les Ecarts de la Nature ou Recueil des princip. Monstruositiés, Paris, 1775.

This work contains illustrations of some of the forms of double monsters, and is considered a good treatise.

1777. *B. C. Faust.* Dissert. Inaug. Descriptionam anatomicam duorum vitulorum bicipitum et conjecturas de causis monstrorum exhibens. *Rintelii*, 1777.

1780. *Prochaska.* Descriptio anatomica fœtis bicipitis in Adnotationibus academicis contin. observat. et descript. anat. Fascic. III. *Pragae*, 1780–84.

This contains some good anatomical descriptions of monsters.

1781. *Blumenbach.* Ueber den bildungstrieb. *Göttingen*, 1781.

A valuable theoretical work.

1782. *J. De Puyt.* Vroedkundige Waarneming van tweelingen, die het water en de vliezen gemeen hadden, in Verhandelingen uitgegeven door het zeeuwsch Genootschap der Wetenschappen te Vlissingen. *Middelburg*, 1782, IX. D, p. 423.

1782. *La Condreniere.* Lettreé sur les écarts de la Nature. Journal de Physiol. Suppl. p. 401. *Paris*, 1782.

1786. *Sahler.* De fœtu bicipiti. *Basileae*, 1786.

1786. *J. Oliphant.* Account of an uncommon case in midwifery where a preternatural adhesion of twins had taken place. Vide A. Duncan's Medical Commentaries for 1785, vol. x. *London*, 1786.

1787. *Knox.* A curious case of a lusus naturae. Ibid, vol. xi. 1787.

1791. *S. Jacobi.* Commentatio de monstris quoad Medicum Forensem. *Halæ*, 1791, 8 vo.

1791. *Sömmerring.* Abbildung und Beschreibung einiger Missgeburten. 12 Taff. *Mainz*, 1791, folio.

A very valuable book.

1793. *Eversins.* Kurze Geschichte der Geburt eines Kindes mit zwei Kopfen und zwei Hälsen. *Scheverin*, 1793, 8 vo.

1793. *Metzger.* Dissert. de monstris. *Regensburg*, 1793.

1794. *Luce.* Ueber die Degeneration organisirter Körper. *Gottingen*, 1794.

1794. *Eisenbeis.* Disp. de Læsionibus mechanicis Simulacrisque Læsionum fœtu in utero accidentibus, etc. *Tübingen*, 1794.

1797. *Autenrieth.* Additam. ad histor. embryonis. *Tübingen*, 1797.

This work contains important theoretical observations.

1799. *Ottens.* De Lusibus Naturæ. *Hardereg*, 1799.

1199. *Narfius.* In Osiander's Neue Denkwürdigkeiten für Aerzte und Geburtshelfer. *Goettingen*, 1799, 1 Bd. 1 Bogenz.

1799. *G. Merulla.* Sopra un monstro umano bicorpore, nato in Messina, Ag. 1798. *Messina*, 1799. 1 pl. quarto.

1800. *Buffon.* Hist. Naturelle. Suppl. IV.
Contains a classification of monsters.

NINETEENTH CENTURY.

1801. *Chr. Ludw. Schweikhardt.* Beschreibung einer Missgeburt. *Tübingen*, 1801, 8 vo.

1802. *Malacarne.* Dei monstri umani, etc. Memor. della societ. Ital. vol. IX. 1802.
This is an essay of intrinsic merit, and of great value.

1803. *Franzagine.* Storia del monstro di du corpi, che naque sul Bresciano. *Padova*, 1803. Folio.

1805. *J. G. Walter.* Museum Anatomicum per decem et quod excurrit lustra maximo studio congestum indefessoque labore perfectum, nunc pro summa Frederici Wilhelmi tertii munificentia ac liberalitate publicissimum factum. *Berolini*, 1805.

1806. *J. C. Zimmer.* Physiologische untersuchungen über Missgeburten nebst der Beschreibung und Abbildung einiger zwillings missgeburten. *Rudolstadt*, 1806. 4. pl.
This work contains general theoretical considerations on monstrosities, with descriptions of some double monsters.

1807. *Jouard.* Des monstruosités et bizarreries de la nature. *Paris*, 1807.

1807. *Weinholt.* Vorlesungen über die Entstehung der Missgeburten. *Bremen*, 1807.

1808. *N. F. Regnault.* Descriptions des Principales Monstruosités dans L'Homme et dans les Animaux, avec fig. col. folio. *Paris*, 1806.

1808. *Moreau de la Sarthe.* Descriptions des Principales Monstruosites dans L'Homme et dans les Animaux. Plates. *Paris*, 1808.

1811. *Otto.* Monstrorum sex humanorum disquisitio. *Francofurti*, 1811.

1812. *Wiese.* Dissertatio Inauguralis de Monstris Animalium. *Berolini*, 1812. *Halle*, 1812.

1812. *J. F. Meckel.* Handbuch der pathologischen Anatomie. 2 Bde. *Halle*, 1812–18.
This is the first complete work on monsters. Its appearance constitutes an epoch in the science of teratology in every respect. The following works of this author, may be regarded as supplemental:
———————. De duplicitate monstrosa. *Halæ*, 1815.

J. F. Meckel. Tabulæ Anat. Pathologicæ. Fascic. IV. *Lipsiæ*, 1817–1826.

————————. Descriptio Monstrorum nonnullorum cum corollariis anat.-physiologicis. *Lipsiæ*, 1826.

————————. De cordis conditionibus abnormib. *Halæ*, 1802.

————————. Von den Verchmelzungsbildungen. Archiv. für Anat. und Physiol. *Jahrgg.*, 1826.

1813. *F. Tiedemann.* Anatomie der Kopflozen Misgeburten. *Landshut*, 1813.

It contains important observations on the genesis of monsters in general, as also are contained in his Anatomie und Bildungsgesch. des Gehirns, 1816; and, Zeitschr für Physiol. I. III. 1824–1835.

1813. *Blumenbach.* De anomalis et vitiosis quibusdam nisus formativi aberationibus Comment. Soc. sc. *Gœttingen*, 1813.

This work is specially valuable in reference to theories of the development of monsters and malformations.

1814. *Stephan della Chiaje.* Descrizione di un capretto monstruoso distomo. *Napoli*, 1814.

1814. *T. B. Ossiander.* Epigrammata in diversas res musei sui anatomici. *Göttingen*, 1814.

1814. *Wm. Lawrence.* "A sketch of the principal deviations from the ordinary formation of the body; remarks on their production; and a view of some physiological inferences, to which they lead." Medico-Chirurgical Transactions, vol. 5, pp. 165–224. *London*, 1814.

It is a very good summary on the subject for the date at which it appeared. It constitutes the article "*Monster*," in Reese's Cyclopedia, vol. XXV.

1815. *Fattorio.* De feti che recchindono feti, dette volgarmente gravidi. *Pavia*, 1815, folio.

1815. *N. Highmore.* Case of a fœtus found in the abdomen of a young man. *London*, 1815. 2 pl. quarto.

1816. *A. W. Otto.* Seltene Beobachtungen zur Anatomie, Physiologie und Pathologie. *Breslau*, 1816.

1818. *Hergenröther.* De gravidit. ingenit. s. de fœtu in fœtu. ————, 1818.

1818. *Capadose.* De fœtu intra fœtum. ————, 1818.

1819. *Chaussier et Adelon.* Dict. de Medicin. Tome. 34. *Paris*, 1819.

1820. *Wassermann.* De mutationibus pathologicis primitivarum in organismo humano formationum. *Padua*, 1820.

1820. *Feiler.* Ueber angeborene misbildungen. *Landshut*, 1820.
Observations on monsters in general, including Hermaphrodites.

1821. *G. R. Treviranus.* Biologie. Bd. III. *Göttingen*, 1802–22.
A valuable work on classification and the theory of malformation.

1821. *J. C. L. Barkow.* Diss. Inauguralis Anatomico-Pathologico-Physiologica de monstris Duplicibus verticibus inter se junctis. *Besolini*, 1821.

1822. ————————. Lecons orales sur les monstruosités. *Paris*, 1822.

1822. *Geoffroy St. Hilaire.* Philosophie Anatomique. *Paris*, 1822. T. II.
A work, as Förster says, "full of brilliant ideas, and also abounding with fanciful and vague views; yet important, and with the other works of the author, quite indispensable in the study of monsters."

1823. *K. F. Burdachus.* Berichte von der königlichen anatomichen Anstalt zu Königsberg. *Leipzig*, 1818–24. Sechster Bericht mit einer übersicht von parasitischen und gedoppelten menschenkörpern. *Leipzig*, 1823. 8 vo.

1823. *Breschet.* Des diplogénèses ou deviations organiques par duplicité. Archives Générales de Medicine. *Paris*, 1823.

1823. *Hessio.* Monstri bicipitis descriptio anatomica. *Berolini*, 1823, 8 vo.

1823. *S. Chiaje.* Descrizione anatomica di un aguellino bicipite. Extratta del Giornale medico Neopolitano. *Napoli*, 1823.

1824. *A. Rosenstiel.* Monstri duplicis rarissimi descriptio anatomica, dissertatio inauguralis medica. *Berolini*, 1824.

1824. *Jourdan.* Dict. des. Scienc. Méd. Tome XI. *Paris*, 1824.

1824. *C. C. Heusner.* Descriptio Monstrorum, Avium, Amphibiorum, Piscium, quæ exstant in Musæo—Universit. litt. Berolin. eorumque cum monstris mammalium comparatio. *Berolini*, 1824. 8 vo.

1824. *Lietzavius.* Historia trium monstrorum. *Regiomonti*, 1824.

1825. *Blumenbach.* Handbuch der Naturgeschichte, 5 Aufl. *Göttingen*, 1825.

1825. *Wirtensonio.* Duorum monstrorum duplicium humanorum descriptio anatomica. *Berolini*, 1825.

1825. *S. L. Mitchell.* Facts and considerations concerning two-headed serpents. Silliman's Am. Journ. of Science. Vol. X. p. 48. *New Haven*, 1825.

1826. *Berry.* Description of two children united together, and now

living in the village of Arasoor, in the district of Bhavany. Trans. Med. Chirurg. Soc. *Edinburg.* Vol. II, p. 35. 1826.

1827. *Cherret.* Recherches pour servir á l'histoire generálé de la monstruosité. *Paris*, 1827.

1827. *Mayer.* Ueber Doppelmissbildungen und derer Eintheilung durch zwei eigne Falle erlautert in Gräfe u. Walther's Journ. de Chirurgie u. Augenheilkunde. *Berlin*, 1827. XB.

1827. *C. J. T. Zschokke.* Diss. Anatomico-physiolica-Inauguralis de Janis. *Berolini*, 1827. quarto.

1827. *Olivier.* Mémoire sur la monstruosité par Inclusion. ——, 1827.

1827. *Serres.* Mémoire sur l'organisation des monstres hetéradelphes. Mem. du Muséum d'historie naturelle. Tom. XV. *Paris*, 1827.

1828. *Baer.* Entwickelungsgeschichte der Thiere. *Konigsberg*, 1828.

This contains many important observations concerning the theory of monsters.

1828. *J. Carl. Leop. Barkow.* Monstra Anamalium Duplicia per Anatomen Indigata. Habito respectu ad physiologiam, medicinam forensam et artem obstetriciam. Tomus Primus. quarto Tabul. XV. *Leipsiæ*, 1828. Tomus Secundus. *Leipsiæ*, 1836.

1829. *Isidore Geoffroy St. Hilaire.* Sur la Monstruosite. These Inaug. *Paris*, 1829.

1829. *Breschet.* Essai sur les monstres humains. *Paris*, 1829.

This author also furnished the article, *Deviation organique*, in the Dictionaire de Medicine.

1829, *Andral.* Anatomie Pathologique. Tom. I. *Paris*, 1829.

1829. *C. E. Rudolphi.* Monstrorum 3 præter nat. c. secundinis coalit. disquis. *Berolini*, 1829. quarto. 3 pl.

1829. *F. Tiedemann.* Beobachtungen ueber die Beschaffenheit des Gehirns und die Nerven in Missgeburten; in Zeitschrift für die Physiologie, in Verbindung mit mehreren Gelehrten herausgegeben von Tiedemann, G. R. Treviranus und L. C. Treviranus. *Darmstadt*, 1829. III. Bd.

1829. *F. Tiedemann.* Beschreibung des Hirns und Rückenmark's einer Missgeburt mit Uebermass in der Bildung; in Zeitschrift für die Physiologie. III. Bd. *Darmstadt*, 1829.

1829. *C. Mayer.* Drei Merkwürdige Doppelmissgeburten untersucht und beschrieben in Zeitschrift für die Physiologie III, B. *Darmstadt*, 1829.

1829. *Osiander.* Handbuch der Entbindungskunst. *Tübingen,* 1829, I. B. p. 624.

1829. *B. G. Knothe.* Epistola gratulatoria in qua partus cujusdam singularis historiam cum trium insimul natorum puerorum descriptione tradit. *Tübingen,* 1829. Bd. I. p. 624.

1829. *Sauvages.* Monstruosités par Inclusion. ——, 1829.

1830. *G. Vrolik.* Over verstrooide beginselen van een 2e kind. *Amsterdam,* 1830. Quarto, 4 pl.

1830. *J. Cruveilhier.* Anatomie Pathologique du corps humain ou descriptions avec figures lithographiées et coloriees des diverses alterations morbides, dont le corps humain est suspectible. *Paris,* 1830–42.

This contains much that is valuable on monsters, also the following work of this author.

Anat. path. générale. I. II. *Paris,* 1849, 1852.

1830. *Castel.* Phenom. physiol ches Ritta Christina. ——, 1830.

1830. *A. C. Bartels.* De Janis inversis ac duplicitate generation. Diss. Inaugural. *Berolini,* 1830.

1831. *Bouvier, et Gerdy.* Gaz. Med. de *Paris,* 17 Juin, 1831.

Contains observations on the classification of monsters.

1831. *E. A. W. Himly.* Geschichte der Fœtus in Fœtu. *Hannover,* 1831. Quarto, 12 plates.

1831. *A. C. L. Villeneuve.* Description d'une monstruosité consistant en deux fœtus humains accolles en sens inverse par le sommet de la téte. *Paris,* 1831. Quarto.

1832. *Gurlt.* Handbuch der Patholog. Anatomie der Haus-Säugethiere. *Berlin,* 1832. Bd. II. mit Atlas.

Also the article, "Monstrum" in Berliner Encyclopäd. Wörterbuch der Medinischen Wissenchaften. Bd. 24.

These are indespensable works in the study of monsters, especially those occurring in animals.

1832. *Isidore Geoffroy St. Hilaire.* Histoire générale et particuliere des Anomalies de l'organisation ches l'homme et les animaux, ouvrage comprenant des recherches sur les caracterés, la classification, l'influence physiologique et pathologique, les rapports généraux les lois et les causes des monstruosités, des varietés et des vices de conformation, ou Traite de Teratologie. Tom. III. avec Atlas, 8 vo. *Paris,* 1832–37.

Since the appearance of the works of Meckel, this is far the most important treatise on Teratology which has been produced. It is the first comprehensive one which has been devoted exclusively to monsters. It is distinguished by valuable original observations, and a comprehensive study

of the literature of the subject. Its value is impaired, however, in consequence of its often very superficial and illogical theoretical views, as well as by prolix elaboration and amplification of the subject.

1832. *E. R. A. Serres.* Recherches d'Anatomiè Transcendante et Pathologique. Theorie des déformations organiques, appliquèe a l'anatomie de Ritta-Christina, et de la duplicite monstruesuse. Tom. I. 8 vo. Atlas de 20 planches, fol. *Paris*, 1832.

1833. *Fleischmann.* Bildungshemmungen der Menschen und Thiere. *Nürnberg*, 1833.

A brief enumeration of the principal checks upon, and hindrances to development. The quotations are greatly in excess of the original matter.

1833. *Xaver Gichrl.* Abhandlung ueber das Wesen der Doppelmissgeburten in Anatomischer, physiologischer und pathogenetischer. Beziehung, besonders ueber Intusfœtation. *Regensburg*, 1833.

1833. *A. Numan.* Beschrijving van een misvormd schaap. met overtolligheid van deelen, in Nieuwe Verhandelingen der Eerste Klasse van het Koninklijk Nederlandsch Instituut, 1833, IV. D. bl. I. en volgg. *Amsterdam*, 1833.

1834. *M. Fr. Lauth.* Thése sur les Diplogénèsis. *Paris*, 1834, 2 pl.

1835. *Bérard.* Causes de la Monstruosité, Thèse. *Paris*, 1835.

1836. *Berger de Xivrey.* Traditions Tératologiques. *Paris*, 1836.

This is a collection of the fabulous cases of monsters related by ancient authors.

1836. *J. C. L. Barkow.* Monstra Anamalium Duplicia, etc. Tomus secundus. *Lipsiæ*, 1836. Quarto.

1836. *H. Matthes.* Specim. Anat. Pathologie, de vitiata genitalium generi quæ Hermaphroditica dicitur. *Amstelodami*, 1836.

1838. *Seidel.* Index Musæi. *Kiliensis*, —— 1838.

1838. *A Numan.* Beschrijving van een grootendeels dubbeld Kalfmonster, in Nieuwe Ver Kon. Nederl. Inst. VII. D. *Amsterdam*, 1838.

1838. *J. Van Deen.* Anatomische Beschreibung eines mönstrosen sechsfüssingen Wasserfrosches (Rana esculenta). *Leiden*, 1838.

1838. *Charvet.* Monstruos, par Inclusion. ————, 1838.

1838. ———— Abbilding einer zwillung-Missgeburt zu Neu-Ulm. 1838. *Bog.* fol.

1839. *Noodt.* Spec. anat. path. de monstr. quod human. *Schoonhov.* 1839.

1840. *W. Vrolik.* Ontleedkundig Onderzoek Beschrijving en Rangschikking dar Dubbelde Missgeboorten. *Amsterdam*, 1840. 4 to. pp. 232. met 9 Platen.

1840. *W. Vrolik.* Handboek der Ziektekundige ontleedkunde, oder De Menschelijke Vrucht beschouwd in hare regelmatige en onregelmatige Ontwikkeling. 2 Bde. *Amsterdam*, 1840, 1842. 8 vo.

This is one of the most complete manuals on Teratology which has ever been written, and compares favorably with the works of Meckel and Is. Geoff. St. Hilaire. That portion which treats of the genesis or development of monsters is particularly valuable.

1840. *Berholz.* De Monstro Duplic. ————, 1840. 2 pl.

1840. *J. North.* Lectures on Monstrosities. The Lancet, vol. I. 1840, pp. 857 and 913. *London*, 1840.

The two lectures are a brief review of the latest investigations of the French and German authors in regard to monsters.

1840. *Ammon.* Die angeborenen chirurgischen Krankheiten der Menschen. *Berlin*, 1840, Mit Atlas fol.

A very valuable work, rich in original observations.

1841. *Adolph G. Otto.* Monstrorum sexcenterum descriptio-anatomica. *Vratislav*, 1841. folio pl. 30, Figs. 150.

A very valuable work, rich in material, accurate in description, and amply and handsomely illustrated with figures of human and animal monsters.

1842. *Bischoff.* Art. Entwickelungsgeschichte mit besonderer Berücksichtigung der Missbildungen in Wagner's Handwörterbuch der Physiologie. I. Bd. *Braunschweig*, 1842.

In the language of Förster, "this book is so superior, by reason of the author's clear and scientific treatment of the subject, as to mark an epoch in Teratology."

1844. *Allen Thompson.* "Remarks upon the Early Condition and Probable Origin of Double Monsters." London and Edinburgh Monthly Journ. of Med. Sci. Vol. IV. pp. 479–490. Vol. V. pp. 568–584 and 639–640. *London*, 1844.

1844. *Gruber.* Anatomie eines Monstrum Bicorporeum. *Prague*, 1844. 6 pl.

1844. *Friedberg.* Hr. d'angebornen Krankheiten des Herzens. u. d. grossen Gefässe. *Leipzig*, 1844. 8 vo.

1845. *J. Vogel.* Pathologische Anatomie des Menschlichen Körpers. Allgemeiner Theil. *Leipzig*, 1845. S. 441–484.

A brief description of all malformations occurring in the human species.

1845. *Fleichmann.* Der Fœtus im Fœtus. ———, 1845. 1 pl.

1845. *Lenckart.* De Monstris eorumque causis et ortu. *Goettingen*, 1845.

The author was awarded a premium on account of the great merit of this work, which is truly valuable.

1846. *C. Rokitansky.* Handbuch der Pathol. Anatomie. I. Bd. *Wien.* 1846. 8°. Neue Auflage, *Wien.* 1855.

This contains a brief synopsis of the subject of monsters. The last edition is illustrated with a few figures. This work is well known in this country, not only by the English translation published by the Sydenham Soc. of *London*, 1849–54, in 4 vols. 8 vo.; but also by its republication by Blanchard & Lea, of *Phila.* 2 vols. 8 vo.

1846. *Boecke.* De ortu et causis monstrorum disquisitio. Diss. Inaug. *Goettingen*, 1846.

This is a valuable contribution to Teratology.

1847. *J. B. S. Jackson.* Descriptive Catalogue of the Anatomical museum of the Boston Soc. for Med. Improvement. *Boston*, 1847. 8 vo. 10 pl. Pages 297 to 316 relate to double monsters.

1849. *D'Alton.* De Monstror. Dupl. Origine et Evolut. ———, 1849, 1 pl.

1849. *W. Vrolik.* Tabulæ ad Illustrandam Embryogenesis. *Amsterdam*, 1849. Folio, 100 plates.

This is an extremely valuable and superb work. It is far the most complete atlas on monsters in general which has ever been published. The embryological illustrations are very good.

1850. *W. Vrolik.* The article "*Teratology*," in Todd's Cyclopedia of Anatomy and Physiology, vol. IV. part II. *London*, 1850.

This article is a brief summary of the subject, it is not illustrated either by cases, or figures.

1850. *Hohl.* Die Geburten missgestalteter, kranker und todter Kinder. *Halle*, 1850.

This work is chiefly devoted to the obstetrical relations of monsters.

1850. *F. Beer.* Beitrage zu der Lehre von den Missgeburten, Inaug. Disser. 8°. *Zurich*, 1850.

1850. *Studiati.* Intorno ad alcuni argomenti di fisiologia generale. *Pisa*, 1850.

Relates to the classification of monsters.

1853. *Wislocki.* Kompendium der pathol. Anatomie. *Wien*, 1853.

1853. *Wm. F. Montgomery.* "Account of a very remarkable case of double monster, with some observations on the subject of

Double Monstrosity." Dublin Quarterly Journal of Med. Sci. Vol. XV. p. 257, 280. *Dublin*, 1853. Plates.

1853. *D'Alton.* De Monstris quibus extremit. superfluæ sunt. ——, 1853. 3 pl.

1854. *Neugebauer.* Duplicitat. an. e. jungen Hasen. ————, 1854. 1 pl.

1855. *Förster.* Handbuch der allgemeinen pathologischen Anatomie. *Leipzig*, 1855. S. 12–26.

1855. *Gerling.* Hypogastrodidymus. ————, 1855. 1 pl.

1855. *H. Wigand.* Ueber Doppelmissbildungen. Inaug. Diss. *Marburg*, 1855. 8°.

1855. *Schullze.* Ueber anomale Duplicität der Axenorgane; in Virchow's Archiv. 7 Bd. 3 Heft. *Berlin*, 1855.

1856. *K. H. Knatz.* Ueber Doppelmissbildungen Inaug. Diss. *Marburg*, 1856. 8°.

1858. *Schmidt.* Ovis bicorporis descriptio, Diss. *Dopat*, 1858.

1859. *Adr. Kussmaul.* Mangel, Verkrümmung u. Verdopplung d. Gebärmutter, die Nachempfangniss u. Ueberwanderung des Eies M. 58 Holzsch. *Wurzburg*, 1859. 8°.

1860. *P. L. Panum.* Untersuchungen uber die Entstehung der Missbildungen zunächst in den Eiern der Vögel mit 107 Abbildungen auf 12 Tafeln. *Berlin*, 1860. 8°.

1860. *A. Forster.* Lehrbuch der pathologischen Anatomie, 5 Auflage. *Jena*, 1860, p. 28, 35.

1861. *A. Förster.* Die Missbildungen des Menschen, systematisch dargestellt. *Jena*, 1861. 2 vols. quarto, 26 plates.

This is a very complete summary of Teratology, it is chiefly defective in the embryology and history of the subject. The portion relating to double monsters, and some of the figures, have been appropriated in the present monograph.

1861. *B. Knappert.* Over aangebornen hartgebreken. *Leyden*, 1861. 2 pl. 8°.

1862. *W Braune.* Die Doppelbildungen u. angebornen Geschwülste der Krenzbeingegend. *Leipzig*, 1862, 20 pl. 4.°

1862. *M. Camille Dareste.*

Annales des Sci. Nat. *Paris*, 1862, T. XVII. p. 31.

This memoir on the history of eggs with two germs, and on the origin of Double Monsters in Birds is a valuable contribution.

1863. *M. Lereboullet.* Recherches sur les Monstruosités du Brochet observies dans l'œuf et sur leur mode de production. Annales des Sci. Nat. *Paris*, 1863. T. XX. Zoologie, Nos. 3 and 4. Plates.

[I have thought it advisable to append to the above chronological table of the literature of Diploteratology a few references to articles on the subject contained in the serial publications of some of the principal scientific societies of Europe. In doing this it is not claimed that all the important articles have been noticed, as the writer has not been able to consult many of the publications of this character.]

Philosophical Transactions. London, 1665–1775. 4 to. *Philosophical Transactions of the Royal Society of London*, 1776–1864. 4 to.

Durston, 1669, No. 65. *Morris*, 1676, vol. xi. *Thorpe*, 1699, No. 259. *De Superville*. No. 465. *Bland*, vol. xxi. p. 362. *C. M. Laurin*, vol. XXXII. p. 346. *A. Cantwell*, vol. XLI. p. 137. *J. Parsons*, vol. XLV. p. 526. *Percival*, vol. XLVII. p. 361. *A. J. Torkos*, vol. L. p. 311. Pl. I. *J. Torlese*, vol. LXXII. p. 44. Pl. I. *Reichel*, and *J. Anderson*, vol. LXXIX. p. 157. Pl. II. *E. Home*, vol. LXXX. p. 276, 1790. *Gibson*, vol. ——, p. 123. Pl. I. 1809.

Histoire (*et Memoires*) *de l'Academie Royale des Sciences*, 1666, 1797. *Paris*, 4 to. (107 vols.)

Histoire, A. D. 1702, p. 27. *Henery*, 1703, p. 39. *Louvois*, 1706, p. 29. *Morin*, 1716, p. 25. *Bouthier*, 1727, p. 21. *De La Condamine*, 1732, p. 309. *Chabelard*, 1746, p. 46. *Bagard*, 1751, p. 77. *S. Cachet*, 1764, p. 72. *Tournelle*, 1775, p. 23. *Fougeroux*, 1775, p. 25.

Memoires. Duverney, 1706, p. 418. *Lemery*, 1724, p. 44. *Morand*, 1733, p. 141. *Winslow*, 1733, p. 368. *Winslow*, 1734, p. 489. *Goeffon*, 1740, p. 210. *Hunauld*, 1742, p. 371. *Morand* et *Lassone*, 1745, p. 35. *Morand*, 1746, p. 41. *Morand*, 1770. *Bordenave* 1776, p. 697.

Mémoires du Musée d'histoire naturelle, T. XV. Paris, Dubrenil, p. 245. Description de deux doubles monstres humains, dont les corps sont opposés l'un á l'autre, accouplés et soudés par les bassins et établissement á leur sujet d'un nouveau genre sous le nom D'Ischiadelphe, *Geoffroy St. Hilaire*, p. 385. Memoire sur un enfant monstrueux determiné et classé sous le nom d'heteradelphe de Benais, p. 395. Notice sur un enfant monstrueux (*heteradelphe* Geoff. St. Hil.) né a Benais en Touraine, le 30 Aôut 1826, par *Rambur*, p. 409: *Serres*, Mémoire sur l'organisation anatomique des monstres heteradelphes.

Mémoires de la Société de Physique et d'Histoire Naturelle de Genéve. Genéve & Paris, 1821. 4 to. T. VIII. p. 129, 1838.

Miscellanea Curiosa, sive Ephemeridum. Medico Physicarum Germanicarum Acad. Imper. Leopoldinæ Naturæ Curiosum. Francofurt et Lipsiae. 4 to. 1670–17—.

Rayger, Dec. I. ann. I. p. 21. *J. G. Greisel*, Dec. I. ann. I. p. 132. *J. M. Nester*, Dec. I. ann. 6, p. 59. *C. Lipstorp*, Dec. I. ann. 6, p.

101. *Hofmann*, Dec. I. ann. 9, p. 37. *B. Chilian*, Dec. II. ann. I. p. 356. *B. Scharff*, Dec. II. ann. 2, p. 254. *J. C. Peyer*, Dec. II. ann. 2, p. 267. *M. B. Valentin*, Dec. II. ann. 3, p. 191. *E. F. Schelhasins*, Dec. II. ann. 3, p. 303. *Hofmann*, Dec. II. ann. 4. p. 288. *Mentzel*, Dec. II. ann. 5, p. 6. *S. Ledel*, Dec. II. ann. 6, p. 152. *Hofmann*, Dec. II. ann. 6, p. 133. *Konig*, Dec. II. ann. 8. p. 305. *C. Patinus*, Dec. II. ann. 10. *J. Lanzoni*, Dec. III. ann. 1, p. 185. *P. J. Hartmann*, Dec. III. ann. 9 et 10 p. 332. *D. V. De Blischer*, Ephem. *acad. natur. Curios.* Cent. III. et IV. *Norimbergæ* 1715 in appendice, p. 127.

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ARTICLE XXI.

Abstract of Cayuga County Medical Society—Revived.

At the annual meeting of Cayuga County Medical Society, held June 1st, 1848, there were, out of its fifty members, but seven present. This was its last stated assemblage.

In 1861, January 18th, thirteen years thereafter, a special meeting was held for the purpose of electing a delegate to the State Medical Society.

On the 4th day of August, 1864, at the suggestion of several physicians, an informal meeting was held, at which seven—just the number that attended the last annual meeting sixteen years ago, were present.

At this meeting a committee was appointed to prepare a circular address to the physicians of the county requesting their attendance on a call for August 31, 1864, for the election of officers, and to make such other arrangements for the resuscitation and perpetuation of the society as might then be deemed necessary.

In accordance with this call there assembled fifteen members, representing various localities, who elected officers to fill vacancies caused by death and removal during the long intermission that had occurred.

The special question discussed at this meeting, viz:—Medical Ethics—the basis of professional dignity and the bond of association between the members of the profession, being introduced for the consideration of the society, it was declared that, as medicine is not a creed, not a dogma, but embraces the whole circle of science in its bearing upon health and life, that a standard unequivocally distinguishing the scientific physician from the dealer in cabalistic preparations be established, and to this end it was Resolved,

That Drs. Alexander Thompson and Edward Hall be a committee to examine and condense the "State Medical ethics" for the guidance of the members of this society in their intercourse with each other and with the public as medical practitioners.

On motion it was Resolved,

That the proceedings of this meeting be published in the Auburn Daily and Weekly Advertiser.

At the adjourned meeting held October 12, 1864, eighteen members being present, the consideration of the subject—medical ethics, of the previous meeting was postponed in consequence of the unavoidable absence of the committee.

At the adjourned meeting held January 11, 1865, the committee appointed by this society to examine and condense the code of Ethics

of the State Medical Society for the guidance of members in their intercourse with each other and the public, would submit the following resolution for consideration:

Resolved, That this society accept, and hereby pledge themselves to be governed by the code of Ethics established by the State society in 1823, and re-published in their several Transactions from time to time. And furthermore, we agree to do all in our power to sustain the honor and integrity of the profession, and to that end, we consider a regular medical education and a continuance in the exercise of its principles and doctrines, the only basis of professional intercourse; and we will decline meeting in consultation with any practitioner whose practice is founded on a *single* principle of medicine, or with those whose practice is wholly founded upon error.

(Signed) ALEXANDER THOMPSON,
EDWARD HALL.

The report was accepted and the committee discharged.

In consequence of the Legislative changes that have occurred relative to the practice of medicine during the past twenty years, it is clearly evident, as the sense of this society, not only for its own character, but for the protection of its members, that a policy be inaugurated which will effectually distinguish them from the herd of charlatans that over-run the land—seriously threatening to deprive community of an educated profession, and reducing themselves to the oblique of a common association with them in matters pertaining thereto:—therefore, the report and resolution of the committee was adopted as the rule of action of this society.

Re-organization of the Cayuga County Medical Society.

Presented by Edward Hall, M. D., of Auburn.

At an adjourned meeting of the Cayuga County Medical society held August, 31, 1864, Dr. Dodge President pro tem. in the chair, and present Drs. Dodge, Hoffman, Van Anden, Button, Hyde, Thompson, Richardson, Clark, Gillmore, Force, Briggs, Dimon, Brinkerhoof, Hall and Fosgate. The minutes of the preceding meetings were read and approved.

In pursuance of a resolution passed at the previous meeting appointing Dr. Dodge to epitomise the lives and characters of Drs. Noyes Palmer, late President, and Curtis C. Cady, Sen., late Vice President, both deceased since the last assembling of the Society, and to deliver the same at the next meeting, the President read an interesting article in relation thereto, whereupon a vote of thanks was moved and tendered to him for his feeling and appropriate address.

On motion, the following medical gentlemen, viz: Joseph C. Rich.

ardson, Edward Hall, Daniel A. Force, and T. S. Brinckerhoof were admitted to membership.

The election of officers being in order of business, the following gentlemen were duly elected :

Dr. David L. Dodge—President.
Dr. Samuel Gillmore—Vice president.
Dr. Blanchard Fosgate—Secretary and Treasurer.
Dr. Samuel Gillmore—Delegate for term of 3 years.
Dr. Lansing Briggs—Delegate for term of 2 years.
Dr. Joseph Richardson—Delegate for term of 1 year.

Dr. Briggs submitted for the examination of members, a pathological preparation of Hypertrophied prostate gland with appropriate remarks illustrated by the specimen and applicable to the disease generally.

A communication from Dr. Sylvester Willard was read by the Secretary, congratulating the Society upon its endeavors to accomplish "an object so desirable as its resuscitation and perpetuation and but for previous engagements, would be present with the fraternity."

The discussion on Diphtheria now being in order, the theory and practice by members present, based in their own practical experience, were freely expressed. The fact that the affection is rare, and that its fatality is almost equal to a complete development of it, was fully sustained by observation, and presents to the profession an important question for its continued investigation.

Dr. Briggs was, by resolution, requested to read at the next regular meeting, his paper on the history of this Society, and Dr. Hall was appointed to lead in a discussion on dysentery—the subject selected for that meeting.

Medical Ethics—the basis of professional dignity and the bond of association between the members of the profession, being introduced for the consideration of the society, it was declared that, as medicine is not a creed, not a dogma, but embraces the whole circle of science, in its bearing upon health and life, that a standard unequivocally distinguishing the scientific physician from the dealer in cabalistic preparations be established, and to this end it was

Resolved, That Drs. Alexander Thompson and Edward Hall be a committee to examine and condense the "State Medical ethics" for the guidance of the members of this society in their intercourse with each other and with the public as medical practitioners.

On motion it was

Resolved, That the proceedings of this meeting be published in the Auburn Daily and Weekly Advertiser.

On motion, adjourned to meet on Wednesday, the 12th day of October next, at 10 o'clock, at the Court House, in the city of Auburn.

BLANCHARD FOSGATE, *Secretary.*

ARTICLE XXII.

Early History of Chautauqua County Physicians. By E. T. Foote, M. D.

To the Medical Society of the State of New York:

Permit me to communicate to the Society some reminiscences relating to the settlement, and early physicians of Chautauqua county, and the original organization of its medical society.

It will be fifty years the ensuing spring since I settled in that county as a physician, and all who preceded me, and most of those who were my early contemporaries have gone to the grave, while I have lingered on the shores of time until I am by priority of election next to the two senior members of the State Medical society.

Very few can now realize or appreciate the privations and hardships endured by the physicians who emigrated to its wilderness counties half a century or more since.

Those who settled in heavily timbered lands, far distant from old settlements, without improved roads or bridges over the streams, can alone fully comprehend them.

Permit me to allude to the rapid progress of improvements in Western New York. There are, I apprehend, members of our society now living that recollect when nearly all that portion of the State west of the German flats, was a wilderness and embraced in the town of Whitestown. At a still later period all of the State west of Genesee river was embraced in the town of Northampton, Ontario county. The same territory in 1802 was comprised in the county of Genesee, and the present county of Chautauqua, then formed but a small portion of the town of Batavia, the first town meeting being held eighteen miles east of Buffalo. At that date there were no bona fide settlers in Buffalo, and but fifteen settlers there in 1804.

In 1804 the entire territory of the county was formed into the town of Chautauqua, in the county of Genesee. In 1811 it became organized into a separate and distinct county and still remains with the same boundaries, and with its original site of justice.

In 1798 the surveyors of the Holland Land company divided the land of Chautauqua county into townships six miles square. The surveyors obtained their provision and most of their supplies from Canada. It was some years later before the townships were surveyed into lots for settlement.

In 1803 Col. James McMahan from Pennsylvania, having made a clearing and sowed about two acres of wheat, and erected a log cabin in the preceding fall, removed into the county and settled about one mile west of the present village of Westfield, on his improvement. He was accompanied by Edward McHenry, who located near him. They underbrushed their own road from Erie county, Pa. The next year Messrs. Eason, McClintock, Griswold, Dunn, Stebbins and Webber, located in the woods easterly of them, mostly in the vicinity of Canadaway and Sheridan, without any road but an Indian trail.

In the summer of 1805, General Paine from Connecticut, the founder of Painsville, Ohio, with a party of New England emigrants and their teams with covered wagons, accompanied by axe-men, cut out the underbrush for the first road into and through the county as they traveled from "Buffalo creek," on their way to "Presque Isle" and Ohio, camping out nights and fording the streams. They were more than two weeks on the way from Buffalo to Erie, a distance of ninety miles.

The same season Judge Cushing, Deacon Holmes, John Walker, Hezekiah Barker, Philo Orton, and some others emigrated from the east and settled along the new road mostly in the vicinity of Canadaway, and in the present town of Sheridan.

In 1806 the first settlement south of the "Ridge" was commenced about Chautauqua lake and its outlet, by Messrs. McIntyre, Bemus, Barnhart, Wilson, Shillito, George W. Fenton, and others. They mostly came by water, up the Allegany and Conewango rivers. Mr. Fenton settled on the south shore of the outlet, about four miles from Jamestown, not then settled. He was the father of Governor Fenton, and his eldest son Roswell was probably the first white child born in that part of the county. The settlers in the south part of the county received nearly all their supplies by water from Pittsburg. About this time the salt trade from Onondago salines to the Ohio river commenced, when large quantities of salt were transported over the new portage, underbrushed road, following the ancient French portage from Barcelona to the head of Chautauqua lake, from thence by keel-boats and canoes to the Ohio river. This was before the salines on the Allegany and Ohio rivers were in operation.

Fifty years since, the county of Chautauqua was more isolated than any other county in the State.

The surrounding counties of Cattaraugus, the south part of Erie county, N. Y., and the counties of Warren and Erie Pa., were nearly a wilderness. Lake Erie on the north was without a steamboat—

there were on it a few small sailing vessels. Not a good road into or through the county, and but four post offices and not a mail route from Chautauqua county into Cattaraugus or Warren counties.

Dr. Squire White was emphatically the pioneer physician of the county, having settled at Canadaway, now Fredonia, in the summer of 1809, when there was no physician in the county or within forty-five miles of him. He was the son of William, and born in Guilford, Vermont, Nov. 20, 1785. He read medicine with his elder brother, Dr. Asa White, of Sherburne, N. Y., and that eminent surgeon, Professor Joseph White, of Cherry Valley, and subsequently attended a course of medical lectures in the city of New York, and was licensed by the Chenango County Medical Society, May 8, 1808. On the organization of Chautauqua county he was appointed its first surrogate, Feb. 9th, 1811, and held the office until 1818. He never was a politician until 1826, when he became a very decided political anti-mason. He was elected a member of Assembly for the county, successively in 1830–31–32. The duties of all the public stations he held, he discharged with fidelity. His great excellence, however, was in his professional career. No physician in the county has practiced as long (48 years), or performed more arduous labors or more unrequited toil. His ride was extensive, and, for some years, amid a sparse population, with extremely bad roads, or through the woods by marked trees, frequently traveling on foot with his medical bags on his arm; yet he never appeared to shun toil, even where there was no prospect of remuneration. As a citizen he was kind and obliging, rigidly temperate, and without ostentation or show. Indeed, he seemed to have very little regard for his personal appearance. He had a retentive memory of what he saw or read while a student, and relied much upon it in the treatment of diseases. He trusted much to the power of nature for recovery. His manner with his patients was kind and well calculated to inspire confidence in his prescriptions and create an attachment to him. I think no physician in the county charged as moderately for his services, even among the wealthy: indeed, they were not remunerative charges, yet by rigid economy he amassed considerable property, perhaps more from rigid economy, and the rise in value of real estate purchased early and retained, than from the profit of professional services. He was negligent in his collections, and very seldom if ever coerced payments. He was an honest man and sincere friend, uniformly kind to his professional brethren, and affectionate in domestic life. He was twice married; first in 1813, to Sally, daughter of Hezekiah Barker, by whom he had four children; second to Lydia, daughter of Judge Cushing, of Fredonia, in 1826, by whom he had a number of child-

ren—the brave Captain Cushing, of the navy, is a brother of hers. He received the honorary degree of M. D. late in life. He died after a short illness of pleurisy, at Fredonia, April 2, 1859, aged 71, universally lamented.

Dr. John Ellis Marshall was the second physician that settled in the county. He was the son of Thomas M., by his wife Sally Edgerton, and was born in Norwich, Connecticut, March, 1785. His mother dying in his infancy, he was adopted into the family of Danis Ellis, of Norwich, from whom he derived his middle name. In addition to a good common school education, he pursued classical studies under the Rev. Dr. Nott, of Franklin. At the age of twenty he commenced the study of medicine with that eminent physician, Dr. Philemon Tracy, of Norwich, and having completed the usual term of study, was licensed by the Connecticut Medical Society in 1808. He commenced practice in Oxford, N. Y., but removed to Mayville, N. Y., in October, 1809, and commenced practice in that new village, and soon entered into a good business. In September, 1810, he married Ruth, the daughter of deacon Orsamus Holmes, of Canadaway. On the organization of Chautauqua county he was appointed the first county clerk, February 11, 1811. He was also appointed surgeon of a battalion of militia, and was with the Chautauqua militia when Buffalo was burned. After he accepted the office of county clerk he declined professional business until he was superseded in 1815, and at once removed to Buffalo and resumed practice. On the 2d of March, 1819, he was appointed clerk of Niagara county, and held the office until February, 1821, when he again devoted himself wholly to professional business, and had an extensive practice, and was highly esteemed as a physician and ranked as one of the best in Buffalo. He was a gentleman of decided moral and religious character, an elder in the Presbyterian church, and always ready to promote every benevolent or religious enterprise. He died at the city of Buffalo, after a brief illness, Dec. 27, 1838, aged 53, leaving a worthy widow and an only son, Orsamus Holmes Marshall, a respectable attorney of the city of Buffalo.

Dr. Jacob Burgess was a native of Lanesboro, Massachusetts, where he was born in 1785, and settled at Silver Creek, New York, about 1811, where he had a limited practice in that vicinity. He was a respectable citizen, but was unwilling to bear the hardships of his profession in a wilderness country, and turned his attention mostly to agriculture. I have no particulars of his early life or medical education. He died at Silver Creek about the year 1856.

Dr. Jediah Prendergast settled at Mayville in 1812. He was the son of William, and born in Pawling, New York, May 8th, 1776, and

removed with his parents to Pittstown, New York, and read medicine with Dr. William Chase, whose daughter he married. He was licensed to practice by a Judge of Rensselaer county, New York, and soon settled at Thorold, U. C., and had an extensive practice, but left Canada about the commencement of the war of 1812, and removed to Mayville and entered into mercantile business with his brother Martin, a firm that continued many years. They kept a small stock of medicines, and although Dr. Prendergast seldom visited a patient, he was in the habit of prescribing for patients at his store. In 1816 he was elected a member of Assembly. In 1818 he was elected to the Senate for one year to fill a vacancy. In 1821 he was again elected to the Assembly. He was a man of strong mind, considerable reading and reflection, and much devoted to financial matters, and accumulated a large estate by mercantile business. He died at Mayville March 2, 1842, aged 82.

Dr. William Prendergast, the son of Judge Matthew Prendergast, was born in Pawling, New York, February 28, 1791, and removed with his father to Pittstown, New York, and from thence came as a pioneer into Chautauqua in 1806. In 1808 he went to Thorold, Canada, to study medicine with his uncle Jediah Prendergast. After completing his studies he returned to Chautauqua and commenced practice in Mayville, where he was soon fully employed, but owing to the scattered population and bad roads he soon declined business and turned his attention to agriculture. About 1815 he entirely abandoned his profession, except in occasional consultations, and became one of the best farmers in the county. He married Miss Elizabeth, the daughter of Martin Prendergast, Esq., by whom he had one son, Martin. Dr. Prendergast was a social, genial gentleman, fond of society, of sound judgment, a kind neighbor, and an honorable man. He was for many years supervisor of his town, and a prominent member of the board. He died suddenly of apoplexy, March 11, 1857, aged 66, universally beloved and lamented. His only son has followed in the footsteps of his father as supervisor, and is one of the best farmers in the county. His worthy widow still survives.

Dr. Lowton Richmond, I understood, was born in Montgomery county, New York, about 1783, and removed with his family to the east side of Chautauqua Lake, near the present village of Dewittville, about 1811. He soon removed from there to the cross-roads, now Westfield, where he had a prosperous practice until 1817, when he removed to Rising Sun, Indiana, where he continued to practice. His health became bad, and he returned to Westfield about 1827 or 28, and had a limited practice until about the year 1834, when he re-

moved to Brightstown, Crawford county, Pa., where he subsequently died. He has two respectable sons, Hiram and A. B., in Meadville, Pa. I have sought for information of them relative to their father, but in vain. Dr. Richmond was a worthy, pious man, a good citizen, kind and attentive to his patients, and generally respected by the community.

Dr. Henry P. Sartwell, the son of Levi, was born in Berkshire county, Mass., about 1790, and removed with his parents in infancy to New Hartford, N. Y., where he read medicine with Dr. Amos G. Hull. He emigrated to Mayville and commenced practice there about 1812. He married Miss Sophia Martin of that place in September, 1814. She died in a few months. He was for some time deputy county clerk, at the same time doing a limited professional business. He left Mayville in 1815, and removed to Yates county, N. Y., where he has distinguished himself as a botanist. I understand he is now residing in Penn Yan, N. Y., a respectable practicing physician.

Elial Todd Foote, M. D., the son of Samuel, was born in Greenfield, (now Gill,) Mass., and emigrated with his parents to Sherburne, N. Y., in 1797. Read medicine with Dr. Samuel Guthrie of Sherburne, the discoverer of chloroform in this country, and attended a course of medical lectures in New York city in the winter of 1814–15, and was licensed by the Chenango County Medical Society in the spring of 1815. I immediately emigrated to Jamestown, N. Y., then an anticipated village, but not named. At that time there had not been any physician located in the county except along the Lake Erie road, and at Mayville, and there was no physician in Warren county, Pa., upon the south. The nearest physicians were Dr. White, at Canadaway, 25 miles north, or at Ischua, 60 miles east, and at Franklin or Meadville, Pa., 60 miles south, and at Mayville, 22 miles west. Much of this large territory was a wilderness with scattered settlements, without means of communication except by water, or by Indian trails or mere underbushed roads. The nearest post office or mail route was at Mayville, 22 miles, and the only mail route into or through the county was from Buffalo to Erie via Mayville. There were but four post offices in the county, all on this route, that was a weekly mail on horse back.

I soon had all the practice I could attend to; the country was rapidly settling and healthy. The distance I was called professionally, especially in surgical cases, the slow travelling on horseback or on foot, made the practice tedious. Many times I traveled by surveyors' lines, guided by marked trees, and crossing rivers without bridges or ferries. Grain for a horse could seldom be found. The provisions and supplies for the settlers were mostly brought from

Pittsburg by keel-boats or canoes. It was not unfrequently the case that patients in severe sickness could not be visited oftener than from three to five days. I frequently swam my horse through streams, while I crossed in a canoe or on a float of logs. I was everywhere received kindly by the worthy plebian people in their log cabins, who were always ready to divide their scanty fare with me and cheer me along in my tedious lonely travels. I love their memory; but very few of them are living. Governor Fenton's father, an early pioneer, was one of my early and worthy patrons. The poor never suffered for the ordinary necessaries of life, if they were to be had in the neighborhood. Fond anticipations of the future were a sovereign balm for every hardship and privation, and gave cheerfulness to toil and privations. With my medical saddle-bags, holding half a peck on each side, well filled with medicines, I traveled over the south part of Chautauqua, and Warren county, Pa., on horseback or on foot, summer and winter, night and day, without regard to temperature or storms, sometimes with the music of wolves to break the monotony of dark nights and muddy roads, but they did not harm me. After twelve years I became severely afflicted with the asthma. By this time other physicians had come into various places in my circuit, yet I never entirely abandoned my profession while in Jamestown.

The early settlers were mostly young or not past the middle age of life—a noble, hardy race, mostly from the eastern part of the State, or New England, of industrious habits, usually with a good common school education, many of them pious, and the changes wrought by them and their children in fifty years seem almost like a dream. I can scarcely realize it.

The first medicines I procured from New York were brought by a sloop to Albany, thence by a six-horse covered wagon to Buffalo, thence by schooner to Barcelona, thence by wagon over the portage road to Mayville, thence by keel-boat down Chautauqua Lake, costing me about $5 for a hundred pounds. It would now cost about sixty-five cents.

Physicians now pass over the ground of my early practice with easy carriages with all the luxuries of life among a population usually able and willing to pay their medical bills promptly.

While I live I shall never cease to venerate the memory of log cabins and pioneer settlers. Where, I ask, do we find as much warm hearted, sincere ingenuous friendship, sympathy in sickness or amid losses, as in the early days of that country; where there was so little aristocratic feeling, where real worth alone created distinctions, where the sick never wanted for unpaid watchers, and where

the poor pioneer, with his broken limb or cut foot, or other disability, had all of his farm work performed gratuitously, and his family provided for by sympathizing neighbors until he could resume his avocations. Where the poor settler having lost his only cow, had another purchased for him by contributions among his neighbors, or when his log cabin was burned, another promptly and cheerfully erected and furnished by his neighbors. How unlike the sympathy now so often manifested in our cities and old towns.

From my own experience I fully concur with the celebrated blind preacher, Rev. Mr. Milburn, "in ten years of a preacher's life, I confess a grateful love of log cabins and am much inclined to the belief that their humble roofs have sheltered a greater amount of health, contentment, happiness and virtue, than any other state of domestic architecture." The people were more healthy than now—consumptions were rare—child bed fevers almost unknown—cholera infantum seldom seen, and a hardy race of children and youth grew up.

Chautauqua is now unquestionably, one of the best counties in the State.

Doct. Laban Hazeltine, was the first physician that settled in the bounds of my circuit after I settled at Jamestown. He was the son of Daniel, and born in Wardsborough, Vt., Aug. 7, 1789. He read medicine with Dr. Paul Wheeler, of his native town, and attended a course of medical lectures at Dartmouth College, and was licensed by the Vermont Medical Society, April 24, 1815. He married Miss Content Flagler, the same year, and removed to Jamestown the latter part of October, 1815. Many of Dr. Hazeltine's friends and relatives had preceded him from Vermont to Jamestown and vicinity. He was well read in his profession, of industrious, temperate habits, and soon entered into a good professional business, and shared fully all the hardships and privations of the country. He made no pretensions to operative surgery. He was a respectable practitioner, and although we were rivals for public favor, and always politically opposed, there was business for both of us, and we were frequently called in council, yet few physicians, if any, moved along more harmoniously in practice. He was a good neighbor, kind and indulgent to his patrons. He kept pace with the professional improvements of that day, and practiced extensively for about thirty years. He generally enjoyed excellent health until the latter part of his life. He was appointed Post Master of Jamestown in October, 1824, and held the office about five years. In 1846, he sold his real estate in Jamestown and purchased a farm about ten miles distant, in Pennsylvania, to which he removed and pretty much relinquished professional business. His eldest son, G. W. Hazeltine, M. D., succeeded him in

practice in Jamestown. Dr. Hazeltine died while on a visit to his son in Jamestown, after declining health of about one year, May 1st, 1852, aged 63, leaving a widow and two sons and one daughter. He is gratefully remembered as a physician and pioneer who shared largely of the hardships and privations incident to the settlement of that country.

Doct. Samuel Snow was born in Hardwick, Mass., May 28, 1770. Read medicine with Dr. Guthrie of Somers, Conn., and married Love Dickinson, of that town, and removed to Boonville, N. Y., and was licensed by Oneida County Medical Society, July 8, 1807. He practiced some time at Boonville, and removed to Canadaway and commenced practice there in Feb. 1816, and entered into successful practice, although in poor health. He was a good physician and a respectable citizen, and well esteemed by his professional brethren. He died June 28, 1830, age 60. He left a widow. His son, Noah D. has since served one term as sheriff of Chautauqua county.

Dr. Fenn Deming was born in Berlin, Conn., and read medicine in his native town, and was licensed by the Connecticut Medical Society. He was a surgeon in the U. S. army in the war of 1812, and was at the attack on Little York, and present at the death of Gen. Pike. He was subsequently taken prisoner and confined at Montreal, but finally paroled.

He married Miss Loveland, in his native town, and removed to the Cross Roads, now Westfield, in the fall of 1815, and commenced practice, which he pursued for a time, but found it too laborious for his taste. He was appointed Post Master at Westfield, on the organization of that office, and soon after appointed Justice of the Peace, and abandoned his profession. He had a small drug store. He died while on a visit at Lewiston, Ill., October 11, 1834, aged 49, leaving a widow and a number of respectable daughters. He was an intelligent gentleman and pretty well read in his profession, but unwilling to undergo the hardships of a physician in a new country. For the same reason a number of our early physicians abandoned the profession.

Dr. Marcius Simons is the son of Joseph, was born in Gill, Mass., June 6, 1794, and removed with his father to Smyrna, N. Y., in 1796. He read medicine with Dr. Henry Mitchell of Norwich, N. Y., and was licensed by the Cortland County Medical Society, March 4, 1815, and practiced about one year with Dr. John Lynde, of Cortland village. He removed to Westfield, N. Y., in the Fall of 1816. In 1817 he married the daughter of James Dunn, Esq., a pioneer settler of Portland. He was a good student and became a good operative surgeon and successful practitioner, with a good share of business.

He removed to Buffalo, but returned to Chautauqua county and resided at Forestville, but has been for some years a resident in the town of Portland. He was elected a member of Assembly for Chautauqua county in 1844. He has suffered much from rheumatism. He is a judicious physician and respected by his neighboring practitioners. He is now practicing in the town of Portland.

Dr. Silas Spencer is the son of Silas, and was born in Hampton, Conn., Dec. 16, 1788, and read medicine with his brother John, and Drs. Mott and McChestney, of St. Lawrence county, N. Y., and was licensed by the Medical society of that county in January, 1816, and removed to Chautauqua county in 1817, and buried his first wife Elizabeth, at Mayville, in 1818. He married for his second wife a daughter of Col. Gideon Goodrich, of Ripley. He has now practiced at Westfield nearly forty-eight years, and still retains a pretty good share of health and energy. He is an intelligent physician, and has done considerable business. His son John Spencer, M. D., has been in the army, but is now practicing at Westfield, and the business of the father has gradually passed into his hands, while the father enjoys a green old age—is a widower and resides with his son.

Henry Sargent, M. D., was born in New Chester, N. H., April 14, 1790—read medicine in Hanover, and attended lectures at Dartmouth Medical college, and was licensed by the New Hampshire Medical society, in 1813. He married Miss Leonora Favor, of New Chester, and settled in Sinclearsville, twelve miles north of Jamestown, in 1817, and immediately entered into an extensive practice. He was for some years the only physician between Jamestown and Fredonia. He had a hard and extensive field of labor, and shared largely of the hardships of the country, and was well esteemed as a physician and citizen. He was industrious and naturally cheerful and hopeful and lenient to his patrons. In 1825 he sold his property at Sinclearsville, to Dr. R. W. Stockton, who succeeded him in practice, and he removed to the present town of Kiantone where he entered into a good practice with a more pleasant ride than at Sinclearsville, and was highly esteemed there as a physician. He received the honorary degree of M. D., from Castleton, Vt. Medical college. In 1833 he removed to Warren, Pa., where he had an extensive practice. His genial temperament, cheerful conversation, and copious fund of anecdote made him pleasant to his patients and other physicians. He died suddenly at Warren, Pa.

He left an only child, who married the Hon. C. B. Curtis, of Warren. In early life he was inclined to intemperance but became a bold and decided advocate of temperance by precept and example, and became a prominent member of the Presbyterian society at

Warren. His death was universally lamented by the entire community.

Dr. Orris Crosby, the son of Simon, a soldier of the revolution, was born in Danbury, Conn., June 2, 1791. In 1809 he went to Canada to study medicine with his uncle, Dr. Eliakim Crosby. In 1813 he was imprisoned for his opposition to the British government and was finally put on board of the British fleet on Lake Erie, with hand-cuffs on his wrists. At the commencement of the battle on Lake Erie, on the 10th of September, he was relieved from his hand-cuffs and ordered by Lieut. Garland to take his place and do duty as a sailor, which he unequivocally refused to do, when the Lieutenant shot him with a pistol in the breast and left him for dead, but by the time of the surrender of the British fleet to Commodore Perry, he had so far revived as to witness the surrender and find the Lieutenant that had shot him lying dead near his side. He was immediately transferred on board the United States fleet, and ultimately recovered. He carried through life the scar of the pistol bullet, and scars on his wrists caused by ulceration of the skin from the hand-cuffs he wore. From my acquaintance with him I have no doubt the British officers found a fearless and troublesome prisoner. After his recovery he went to Genesee county and completed his medical studies with Dr. McCracken, of Batavia, and was licensed by the Genesee County Medical society in 1817. He married Sally, the daughter of Col. Patrick, a most estimable woman, and removed to Fredonia in company with his uncle Eliakim Crosby, and opened a druggist store and commenced practice and was successful in business. He was a great admirer of Gen. Jackson, and named his only son after him. He was of ardent temperament, sincere friend, good neighbor, and beloved by his patients. About 1836 he lost his wife, whose death was a deep and lasting sorrow, depriving him of a wise counsellor, an admirable companion, and an unfailing friend. He had two daughters and one son, highly respectable. He removed to Belvidere, Illinois, about 1837, and from thence to Point Bluffs, Wisconsin, where he died, April 8th, 1862, Æ 72. He was much beloved by the physicians of Chautauqua county.

Organization of the Chautauqua County Medical society.

At the June term of the Court of Common Pleas and General Sessions of the peace, held at the court house in the village of Mayville, June 24, 1818, a meeting of the physicians of the county was held, pursuant to previous legal public notice, at the court house, but all the rooms being occupied the meeting was adjourned to the inn of Gen. John McMahan, in Mayville, and the following physi-

cians were present and united in the organization, viz: Drs. Lawton Richmond, Fenn Denning, Silas Spencer and Marcius Simmons, from the Cross roads; Drs. Samuel Snow, Orris Crosby, and J. B. M. Whaley, of Fredonia; Drs. Laban Hazeltine, and Elial Todd Foote, of Jamestown; Drs. William Prendergast and Orange Y. Campbell, of Mayville; Dr. Henry Sargent, from Sinclearsville.

The meeting was organized by choosing Dr. E. T. Foote chairman, and Dr. Fenn Denning secretary.

It was resolved unanimously to effect the organization of a county medical society by the name and style of "THE CHAUTAUQUA COUNTY MEDICAL SOCIETY."

Thereupon they proceeded to elect the officers of the Society by ballot, with the following result, viz: For President, Elial T. Foote, M. D.; Vice President, Orris Crosby; Secretary, Fenn Denning; Treasurer, Samuel Snow; Censors, Henry Sargent, Orris Crosby, J. B. M. Whaley; Delegate to State Medical Society, Elial T. Foote.

Resolved, That the annual meeting be held at the Court House, in Mayville, on the Wednesday succeeding the 3d Tuesday of June in each year. A semi-annual meeting at Fredonia.

Thereupon the meeting adjourned *sine die*.

FENN DENNING, Secretary.

NEW HAVEN, CONN., *Feb.* 3, 1865. E. T. FOOTE, M. D.

ARTICLE XXIII.

Report of Dr. Edmund S. F. Arnold, one of the delegates to New Jersey.

Having attended, as a delegate from this Society, the ninety-ninth meeting of the New Jersey State Medical Society, held at Burlington on the 24th and 25th ultimo, I beg to report as follows:

About sixty members of our New Jersey medical brethren, about the average number, were present, and your delegate, with the corresponding members from Pennsylvania, were cordially welcomed. Dr. John H. Griscom, of New York, was also invited to take his seat as an honorary member, and to participate in the deliberations of the Society.

The first evening's session was devoted exclusively to routine business, during which the president took occasion to make some remarks urging the propriety of delegates appointed to other societies attending personally or by substitute, and in all instances making written reports. Apart from the interest attaching to such delegations as expressions of courtesy, and evidences of mutual good will between the professional men of different States, another valuable purpose may be served by their reporting in writing. Although it is true the general proceedings are reported in the journals, special features may often be brought with advantage more immediately under the notice of the respective societies by the presentation of such reports. These features might include differences in organization and constitution, or special advantages possessed by one over the other, interesting questions arising in debate—anything, in short, specially worthy of note, and that may seem to furnish useful information, or themes for profitable discussion.

On the following day, after prayer, the President, Dr. E. M. Hunt, read his address, taking for his subject: "Medicine as a Science, a Business, and an Art." It was an exceedingly able and eloquent composition, and a noble vindication of our profession in its several aspects. The Society marked its sense of approval by voting the publication of 500 copies over and above those contained in the printed transactions. The corresponding delegates were next formally presented, and courtesies interchanged. The report of the standing committee followed. This struck me also as a very interesting feature in the proceedings, and worthy of imitation. Each county society has a reporter to whom its members report prevalent

diseases, interesting cases, &c., occurring in their respective localities; these again are furnished in abstract to the standing committee, and incorporated in their report, while cases requiring it are entered in full in an appendix to the report in the printed transactions of the society. A great amount of valuable information is thereby compressed into a comparatively small space.

A committee had been formed at the session of 1864, to memorialize the Legislature to establish an Inebriate Asylum, and the matter had been before that body: but the measure failed to pass, and the committee was discharged.

The reading of an essay, election of officers, &c., terminated a meeting characterized by the dignity and harmony of its proceedings, the prompt despatch of business matters, and great ability in the papers read.

The time of meeting was fixed for May, next year, when the Society will meet at New Brunswick and celebrate their hundreth anniversary, and a hope was expressed that all corresponding societies would be fully represented.

The corresponding delegates were most hospitably entertained by Dr. Franklin Gamett, of Burlington.

Respectfully submitted,

EDMUND S. F. ARNOLD,

Notices of Deceased Members.

ARTICLE XXIV.

BIOGRAPHICAL SKETCH OF MASON F. COGSWELL, M. D., OF ALBANY, NEW YORK.

A discourse delivered upon the occasion of his funeral in the Second Presbyterian Church, by Wm. B. Sprague, D. D.*

There is a solemn significance in being assembled to perform funeral rites in the house of God. In all ordinary cases where our friends die, those who have been associated with them in daily or frequent intercourse, repair to the dwelling which their removal is about to render desolate, and there join with the bereaved circle in invoking the gracious influence of the Sanctifier and the Comforter. But there are cases in which the sense of loss is so wide and deep, the number who desire to join in the last tribute so large, that ampler accommodations become necessary and then what place so fitting as God's own temple, where his people are encouraged in all circumstances, to come and hold communion with him? This is our experience to-day. A cluster of bleeding hearts have already breathed forth their prayers to God from amidst the bosom of domestic retirement, and from the very spot which is hallowed by the most tender and grateful remembrances. And now this sanctuary has opened its doors to admit the multitude who were in relations, nearer or more remote to our departed friend, and who regard it a privilege to testify, by their presence here, their respect for his memory. It is only necessary to look over the assemblage which the occasion has convened to know that a man of mark has fallen among us.

* The appearance of this paper in the Transactions may require a few words of explanation. Doctor Sprague has been for thirty years the intimate friend and pastor of Doctor Cogswell, and was well acquainted with the events of his life and well fitted to appreciate his excellent qualities. The discourse delivered at his funeral, which is here printed, was in all respects satisfactory to the friends of Dr. Cogswell, and it occurred to me, while preparing a biographical sketch of the Doctor for publication in the Transactions, that the purpose would be better obtained by introducing the discourse, just as it was delivered, than by anything I could produce. Those of the Doctor's friends to whom I submitted the suggestion, thought well of it, and it was accordingly adopted. THOMAS HUN.

I cannot dissemble the fact that in speaking here, in the presence of the unburied coffin of our friend, I feel embarrassed in saying all that my emotions would dictate or even that the occasion seems to me to demand. I cannot forget that I am speaking of one whose habits of thought and feeling were of the most quiet and unostentatious kind and that no one would shrink more sensitively than he would have done from the idea of becoming the subject of funeral eulogy. I do not mean to eulogize him in the sense of highly colored extravagant representation, and yet it is due to the living; due to the friends in whose hearts his memory is most deeply embalmed; due to his brethren of the medical profession; due to the community in which he has spent his whole professional life; that there should be included in these funeral services some brief notices of his life, and some general estimate of his character.

Dr. Cogswell was eminently favored in having descended from the best stock of Puritan ancestry. His grandfather, the Rev. Dr. James Cogswell, was one of the prominent Congregational ministers of Connecticut, and died in 1807, after the lapse of sixty-three years from the time of his ordination. What the ruling passion of this venerable man was may be inferred from the fact that, a little before his death when his memory had become a perfect blank in respect to all earthly things, and he did not recognize the faces of even his own family, at the mention of the name of Jesus, his features brightened up into an expression of life and love, and he exclaimed, "He is my Saviour." The father of our departed friend was Dr. Mason Fitch Cogswell, who was graduated at Yale College in 1780; became an eminent physician and President of the Medical Society of Connecticut; and, after a life of great activity and honorable usefulness, died in 1830. His mother was a near relative of the illustrious Colonel Ledyard, who commanded Fort Griswold in Groton, opposite New London, in 1781, and was brutally assassinated by the British officer to whom he surrendered it; she was a lady of rare accomplishments, of great gentleness and kindness of spirit, and withal was a devout and earnest christian. In a home in which a parental influence of the purest and most healthful kind prevailed, and in society such as this favored parentage would be likely to secure, our friend passed his earliest years; and his recollections of many of the honored and noble characters who used to frequent his father's house, remained vivid till the close of his life. He entered Yale College in 1825 and graduated in 1829, and shortly after his graduation commenced the study of medicine under Dr. Alexander Stevens, one of the most eminent medical practitioners in the city of New York. Here he continued until sometime in the year 1832, when he received the

degree of Doctor of Medicine from the College of Physicians and Surgeons in that city. For about a year he acted as Dr. Stevens' assistant; and, during the summer of '32, rendered memorable by the prevalence of the Asiatic cholera in this country, he was in constant attendance at the New York City Hospital. In 1833 he came to Albany and commenced practice; and here he has been faithfully and successfully discharging his duties, and growing in public respect and confidence ever since.

Dr. Cogswell, besides having had a large and most respectable medical practice, has occupied, at different periods, various important public posts of professional responsibility. He has been the physician of our own city hospital ever since its organization. On the breaking out of the Rebellion he was appointed Examining Surgeon at this post, an office of no small delicacy and difficulty, and he actually examined several thousands of volunteers in respect to their capabilities for military duty. He was appointed surgeon of the Post Hospital in 1862; and when in 1864, this became a United States General Hospital, he had the place of Assistant Surgeon of volunteers, and subsequently he received the appointment of surgeon, which was waiting for the ratification of the United States Senate at the time of his decease. After the battles of Williamsburg and West Point, in the summer of 1862, a call was made for volunteer surgeons to meet the exigency of the service. Dr. Cogswell, fired by a spirit of lofty patriotism, was among those who responded to the call. He directed his course first to Fortress Monroe, and then up the Pamunky river to the White House in Virginia. General McClellan, having then just advanced with his forces from the last mentioned point towards Richmond, had left the sick and disabled of his army behind him; and for the relief and accommodation of these a field hospital was provided, and Dr. Cogswell was very efficient in its establishment. Here probably from insufficient diet and impure water, in connection with his arduous labors and constant exposure, he contracted an insidious disease that was never afterwards fully dislodged from his system. For some time after his return he was actually confined by illness; and though he was soon able to attend to his accustomed professional duties, he has always felt that the vigor of his constitution had been materially impaired in consequence of his visit to Virginia. Since that time, however, the office that he has held, under the United States Government, has kept the energies of his mind and body in constant requisition; and notwithstanding his imperfect health, he has probably performed a greater amount of labor than during any previous period of equal length in his whole life. And the result of his labors is, I under-

stand, a monument of both his skill and his fidelity. I have been assured upon good authority, that no hospital in the Department of the East, which includes the whole of New England, the State of New York, and part of New Jersey, has been conducted with so much order, neatness and general efficiency, as this of which Dr. Cogswell has had the charge. In addition to his other more public medical services, he was associated with one of his brethren in this city, in February, 1863, under the direction of the Sanitary Commission, to ascertain the general condition of the hospitals in the West. They went as far as St. Louis; and though no public report was ever made of the result of their mission, it is understood to have been highly successful. This year opened upon our friend with the promise of renewed health; and he remarked to some of his friends, in the interchange of salutations on New Year's day, that he really felt almost like a new man; and that he hoped that, with the beginning of the year, he was casting off the physical burden by which he had been so long oppressed. On that day he made his last call at my own house, accompanied by his two sons, who were his pride and his joy; and I never saw him when he seemed more free and genial and cordial than in that interview. Before many days it went abroad that he was laboring under a local malady, first of a milder, then of a more aggravated character. Presently it became manifest that there was a general feeling of anxiety concerning him spreading through the community. We could scarcely pass his door without observing indications that one or more of his medical brethren were at his bedside; and when we entered his dwelling, we always found friends who had come, in their solicitude, to learn minutely concerning his condition. For several days we were alternately encouraged and disheartened, by what we heard, in respect to the prospect of his recovery, until on Saturday morning last, the dark signal at the door revealed to us the fact that our worst fears were realized.

The character of Dr. Cogswell undoubtedly took its hue, in no small degree, from the influences of high social and Christian culture amid which he was thrown in early life, though we must look still farther back to an eminently favored original constitution. The operations of his mind were rather calm and sure than brilliant and startling. He was diligent and patient in his investigations, and rarely failed of reaching the right conclusion. Of his moral qualities, that which perhaps took the precedence of every other, was his unyielding regard to right. Questions of expediency with him were easily merged in the higher question of duty. He was intolerant of anything that bore even the semblance of a violation of principle, and though he must adhere to his convictions at the expense of dif-

fering with his best friends, adhere to them he would and did. At the same time he was constituted with the most generous and tender sensibilities. He was genial, confiding, sympathetic, and withal so sincere that no one ever asked the question whether any word or action of his could have any other meaning than that which was apparent. He was the very soul of honor—meanness in every form he loathed, and nothing like this roused his indignation and drew from him burning words. In all his intercourse he exhibited the most considerate regard to circumstances, and the most delicate sense of propriety—never needlessly wounding the feelings, even of the humblest person with whom he was brought in contact. Though it was manifest that his native element, and that in which he breathed most freely, was an elegant refinement, he could, with a graceful facility, accommodate himself to all classes, and that without the slightest compromise of his dignity or sincerity. He was modest and unostentatious in all his movements; and, while he accepted gratefully the tokens of public respect and confidence that came to him, he never revolted you by any expression of conscious superiority or self-exaltation.

Dr. Cogswell, to the great regret of his many Christian friends, never made a public profession of religion. It was by no means a subject to which he was indifferent, but he seemed to have inherited a constitutional diffidence in respect to it from his venerable father, who, though he lived to old age, and lived for many years in the daily exemplification of the Christian graces, had never sufficient confidence in his own Christian experience to feel justified in publicly avowing himself on the Lord's side. But there were circumstances connected with the history of our friend which proved conclusively that he had thoughts and feelings in respect to his higher interests, which were not indicated by the fact of his remaining out of the church. The first thing he did in becoming the head of a family was to build a domestic altar; and on that altar a daily sacrifice was offered until the last fatal disease disabled him for the service. At the bedside of the sick and the dying he has often acted in the double character of a physician for the body and a physician for the soul; and when he has seen that there was no hope of recovery, he has earnestly directed his patient to the Saviour, or has spoken to him grateful and loving words of the glory into which he was passing. In a prayer which he offered in his family a short time since, he uttered some expression having reference to the love of Christ, and instantly his utterance was obstructed, so that for a few moments he was unable to proceed; and when, afterwards, he was interrogated by a member of his family as to the cause of his hesitation, he said frankly that the emotions awakened by the view which he had of the

love of Christ, quite overcame him. From the commencement of his last illness, he seems to have been impressed with the idea that it would prove to be his last, and in a conversation with his wife, whose happiness was dearer to him than his own, and before his mind had yet began to wander, he said, calling her by her name: "If I die, do not be distressed concerning me, for I die in Christ, and our dear children I hope will early be brought into the kingdom." In my own conversations with him, which occurred in the progress of his illness, he uniformly expressed a strong confidence in his Saviour, and a willingness to have the issue of his disease determined by Infinite Wisdom, though during a part of the time his mind was somewhat unstrung through the workings of his malady. From such facts as these I am sure that mourning friends may derive much comfort, even in the absence of what they could have so much desired—a public Christian profession.

But I must say something of Dr. Cogswell as a physician, though I am aware that it becomes me to speak cautiously in the presence of so many of his professional brethren, who are of course far more competent to judge of his medical abilities and attainments than I am. I might indeed refer to the judgment that has been passed upon him since his death, by one of the most eminent physicians in the city of New York or in the United States, assigning to him a place in the foremost rank of his profession; but I prefer rather to speak of those particular characteristics of which I have myself been a witness, in connection with his attendance as my family physician, during the last twenty-five years. I may say, then, that there was that in his air, and manner, and general bearing, that was pre-eminently suited to a sick chamber. Without saying anything to occasion needless alarm, there was a sympathetic gentleness in his approaches, that made his presence most welcome, and that predisposed the patient to confide in his prescriptions. He examined with great thoroughness the case for which he was to prescribe, and deliberately formed his judgment upon it, and the result generally showed that that judgment was right; but if the case was specially complicated and obscure, so as to baffle his discernment, he had no false pride to prevent him from acknowledging his ignorance or his doubts. If it were a severe malady with which he was called to contend, he was on the alert to detect every change and to meet it, if need be, with the promptest application. If the case had a fatal issue, his heart was in evident sympathy with the heart of his patient, until the latter had done beating, and then it was in sympathy with the bleeding hearts of the bereaved family, and whatever he could do to soothe or to console he did with the utmost alacrity. I must not omit to say that while his practice was largely among the more cultivated

and wealthy classes, he never turned a deaf ear to the calls of the poor, and he reckoned it no hardship to attend upon them, ministering to their comfort in every way that he could, when he was certain of receiving no pecuniary compensation. I may safely say that, throughout the whole field of his practice, he was recognized in every family as a dear personal friend; and I doubt not that large numbers to whom he has been thus related, if they should follow the dictates of their feelings, would put on badges of mourning, and go and shed bitter tears upon his grave.

And now, having thus glanced at the life and character of this honored and beloved physician and friend, what remains but that we open our minds and our hearts to whatever is monitory, whatever is comforting, in connection with this sad bereavement. Here are various classes represented, to each of which the voice of God speaks through the solemnities of the hour, as truly as it speaks to Moses from amidst the glories of the mount. First of all, here are those who mourn the death of an endeared relative, while the greater number whose hearts are most deeply smitten, have staid behind to mingle their prayers and their tears in the desolate dwelling. To each one of this bereaved circle—to the widow bowed under a burden of grief which human language is inadequate to represent—to the dear children bereft of their father when his influence seemed the most needful to the formation of their character—to the sisters who have come from their several homes to proffer their sympathies and mingle their sorrows where the joyous fraternal welcome used to greet them, and one of whom was yet weeping beside the coffin of a beloved child when this second barbed arrow struck her heart—to all who mourn as relatives on this occasion, God is addressing a solemn charge that they should acknowledge his providence in the event, not only reverently and trustingly, but gratefully, for surely he has qualified the bitterness of their cup with many softening ingredients. Here is a large representation of his brethren of the medical profession, who have had the best opportunity of appreciating his admirable qualities, and with many of whom he has been more or less intimately associated in his professional engagements. Let them not be satisfied with paying any tribute to his memory short of that which consists in making a wise improvement of his death. Let them remember that they are themselves rapidly advancing towards a point where they must come in conflict with an agency that will baffle the highest skill of their own profession; and that then the only question that they will regard as of any moment is whether or not they have followed the prescriptions of the Great Physician. Here are scores, and I believe hundreds, who have become diseased or maimed in their country's perilous service, and who have been sent hither to

share the daily medical attentions of our departed friend. He mingled with them as a father or a brother, and their presence here today, notwithstanding their many infirmities, is the strongest testimony they could render to the careful and affectionate fidelity that has characterized his intercourse with them. Let these defenders of their country remain as true as ever to their country's interests—let them, from amidst the confinements of the hospital, breathe out their prayers that the great work of our national deliverance may be speedily accomplished—let the memory of their departed physician, whose movements among them have been marked by such unwonted interest and tenderness, be embalmed in their hearts, no matter how deeply; but let them not forget that until they have enlisted as soldiers under the banner of the cross—until they have placed themselves under the care of the great Healer of men's moral diseases—their own highest personal interests remain in fearful jeopardy. Here are many to whom the friend whom we mourn has ministered, night and day, in acts of professional skill, and tenderness, and efficiency, during a long course of years. Here are husbands and wives, parents and children, brothers and sisters, who have seen him at each other's bedsides, closely watching and meeting every symptom, and taking on a grateful and almost jubilant look, when some dangerous crisis was favorably past—let all these bless God that they have been privileged to share his services so long, and let them be diligent in their preparation for that world where the inhabitants shall no longer say, "I am sick." Here are those, finally, who have been fellow worshipers with him, some of them for more than a quarter of a century. He accounted it a high privilege to be here, and nothing but occasional attacks of disease to which he was subject, or urgent professional engagements, kept him away. It is less than a month since I saw him, sitting yonder in his accustomed seat, with nothing to indicate that death's arrow was pointed at him and was even then upon the string. But a remark which dropped from him, on his way home, in respect to what he had been hearing, revealed what is now believed to have been at least a momentary presentiment that the time of his departure was at hand. Let not the removal of a member of this congregation, so highly esteemed and beloved, be lost upon any of us. Let us supplicate the influences of God's gracious spirit to give effect to the dispensation in rendering it a ministration of mercy to us all. Let this coffin, the presence of which spreads such gloom through the place, be regarded as God's accredited message come to bid us to prepare to die. May each of us, when the decisive hour comes, be able to say from the heart, what our dear friend said, when his voice was faltering in death—"Christ, Christ is my only hope."

ARTICLE XXV.

LIFE AND CHARACTER OF THOMAS GOODSELL, M. D.

By D. G. Thomas, M. D., of Utica.

[Read before the Oneida County Medical Society.]

In complying with the duties assigned me by a resolution passed at the semi-annual meeting of this society, January 12, 1864, I feel that I am poorly qualified to prepare a fitting tribute to the memory of Dr. Thomas Goodsell. Although I had known him many years, I had seldom met him at the bedside of the sick, and from personal observation have but little knowledge of him as a practitioner of medicine. But the general features of his mind and character, the prestige of his men, the interest he manifested in the welfare of society; and his professional relations, were known by all and became the common property of his associates.

By his death we are reminded that occasionally we are called upon in our corporate capacity, to pause in our career, and listen to the lesson of the passing hour. Another link has been broken which bound the past with the present; and a veteran member of the medical profession, has been called to lay aside his armor, and give an account of his defeats, and his victories. He who for almost three quarters of a century has stood sentinel between the living and the dead, has at last himself been assailed by the unseen messenger, and fallen an easy prey to the remorseless reaper. But he fell not until most of those who had started with him in his professional career, had been summoned from his side; not until the enthusiasm and ardor of youth, had given place to the self reliance and maturity of manhood; not until the struggles for professional distinction had been rewarded with a fair measure of success; and his days of anxiety and toil, had glided softly into their evening light. A professional patriarch, his days has been lengthened out that the example of his long and upright life, might become a guide to the younger members as it had been to the older ones who had been associated with him.

He was the second son of Thomas Goodsell of Washington, Litchfield county, Connecticut, and was born in June, 1775. I have not been able to obtain many particulars of his early life, nor of the causes or motives which first turned his attention to the study of medicine. The history of those early impulses and preferences which

so often foreshadow the coming man by their decisive and persistent character; is not embraced in the material within my reach. He engaged in the study of medicine with Dr. Sheldon of Litchfield, Connecticut. After pursuing the ordinary course of studies, he settled in Woodbridge, New Haven county, and after several years practice he left the ride to a younger brother, and visited Philadelphia. Here he attended a course of lectures at the University where Rush and his compeers filled the chairs of the various departments, and became a licentiate of that institution in the spring of 1809. At his return from Philadelphia he settled in New Haven, and after practicing there about one year he removed to Whitesboro, Oneida county, N. Y., and engaged in business with Dr. Capron; while here he married a niece of Judge Platt, Miss Livingston. He soon became satisfied that Utica would become a place of more importance and give him a better field for the practice of his profession, and again changed his residence and came to the city in 1815. In 1817 he joined the Medical Society of the county of Oneida. In 1827 he was appointed to the Chair of Materia Medica in the Medical College of Pittsfield, Massachusetts. During this year he also received the honorary degree of Doctor of Medicine, from the medical department of Yale College, New Haven. He retained his professorship but one year, and ever afterwards confined himself to practice. In 1836 he was chosen delegate to the State Medical Society, from Oneida county, and in 1847 was elected permanent member of that body. In 1836 he was chosen a fellow of the Albany Medical College.

He acquired an extensive business, having the confidence of many of the best families of the city, which he retained until from choice he relaxed his energies in family practice, and sought in some degree a more quiet life. But it is human to err. Perfection is not attained this side the grave, and like other mortals, Dr. Goodsell had some qualities that interfered with his professional career. Endowed by nature with a fine organization; with large moral, and intellectual faculties, which had been cultivated to a degree which was not usually attained by the medical students of his time, his advent in the profession gave promise of a brilliant career. But those fine organs were connected with a temperament which did not allow them to rise to the full measure of their capacities, only upon occasions of more than ordinary interest. The under currents and small occasions which an untiring energy constantly bends to its purposes, to carry forward its plans to a wide spread business and reputation was often lost to him. But notwithstanding these disadvantages, but few physicians have succeeded to a better class of business, or retained for so many years the confidence of the public. The friend of the

poor, he gave them freely of his time and his talents, trusting for his reward to the poor man's God. For the last few years he had engaged but little in practice, but was able to walk about the streets until near the close of his life. Time had touched him so softly with his iron hand, that he glided out of the active employments of his profession, as year after year passed over him, with scarcely an apparent change. On the afternoon of January 11, 1864, he was seized suddenly with nausea and vomiting, followed with hemorrhage from the bowels, and early on the morning of the 12th he passed quietly away at the advanced age of 89. His wife died a few weeks after, well stricken in years. Two daughters and two sons are left to mourn their loss, but to revere their memories.

In his professional intercourse he was easy, affable and courteous, guided by high and honorable motives, always an uncompromising advocate for the dignity and honor of his calling, and ever ready to bring forward measures to purify its character and elevate its position. He was a genial companion, full of wit and humor, with the ever ready anecdote to illustrate the subject of remark. In his social relations of friend, family, neighbor, and citizen, his suavity of manner gained him a ready access to the heart, and secured him a cordial reception. Happy in his domestic relations, his home was the center of every affection that could purify the heart; sanctify the family circle; and shed unfading pleasures around its altars and its fireside. He was ever the same; not disturbed in temper by the changes and struggles about him; he rose above the petty annoyances of life, and looked unmoved on the turbulent passions of men. His moral and religious character were exemplifications of his high attainments in each; while his life was a daily exhibition of the principles, and duties which belong to the christian gentleman.

Though not as long identified with Oneida county as Drs. Blair and Whaley, still he had been here long enough to see great and important changes, both without and within the profession of medicine. He had seen generations come on the stage of action in the helplessness of infancy; reach the maturity of manhood, and sink before him to the grave. He had witnessed the improvements made in the higher cultivation of the soil, and its modifying influence over the types of disease. He had witnessed the progress which has been made in medical science for seventy-five years, the changes which have been made in the preparations of medicines; in their application as remedies; and in the modes of investigating morbid actions. He has taken the young by the hand on the threshold of their studies, and after journeying with them through the ordinary years of professional life, has waved them a last adieu as they glided into the ocean of eternity. His life though long, has found its close,

and as it had been governed by high moral and religious impulses, his end was peaceful and happy, for his reward was sure.

What now to him are professional rivalries: the struggle for social position, or the aspirations of ambition. Long ere this he has measured the standard of earthly greatness, on a scale of intelligence far beyond the comprehension of the human intellect. Here he groped his uncertain way amid conflicting interests, and the dim lights of reason. There he will form his conclusions from the higher endowments of a more perfect life. Here his enjoyments were alloyed with care and sorrow. There he will find no disturbing elements to mar the fulness of his fruition. Such is the boon which has been promised the steward who faithfully employs the talents which the great master confides to his keeping. He has left us an example worthy of imitation to guide us upward to the same great end.

ARTICLE XXVI.

Notice of Franklin Bache, M. D., of Philadelphia, Penn. By Edward R. Squibb, M. D., of Brooklyn, N. Y.

I beg, Mr. President, to occupy a moment or two for noticing the death, within the past year, of an honorary member of this Society and a great and good man, to whom the profession of this country is as much indebted as to any one of his time.

Soon after the last session of this society the professional journals announced the death of Dr. Franklin Bache, of Philadelphia, the well known professor of chemistry of the Jefferson Medical college, and one of the authors of the U. S. Dispensatory. His useful and productive professional career commenced as an Assistant Surgeon in the U. S. army. After the war of 1812 he became a chemical author and teacher, and from that time occupied the chairs of chemistry in the Philadelphia College of Pharmacy, and the Jefferson Medical college. Throughout the career and various revisions of the U. S. Pharmacopœa he served as an assiduous and probably indispensable laborer, and closed his useful life just as the last revision was completed; and it is almost certain that the unremitting work of more than three years as chairman of the last committee of final revision of the Pharmacopœa tended to shorten his valuable life.

As an example of thorough honesty of purpose and practice carried into the smallest acts of every day life, and of persistent care and accuracy of research and statement, his whole life, private as well as professional was so pervaded and governed by the spirit of truth in his head and heart, that his motives and actions passed entirely unquestioned by all who knew him, and obtained confidence and respect everywhere.

We all appreciate his labors and honor his character as exhibited in his work, but for those of us who felt his influences through a more intimate association I earnestly desire that his inflexible wise honesty might be impressed upon us with some irresistible power, to govern motives and acts.

Let us dedicate a paragraph in our current transactions to respect for the memory of so great and so good a man, to whom we are so much indebted.

ARTICLE XXVII.

Biographical notice of N. Winton, M. D., of Havana, N. Y. By S. B. H. Nichols, M. D., Moreland, N. Y.

[Presented by request of the Schuyler County Medical society.]

Dr. Nelson Winton, the subject of this brief notice, was born in Fairfield county, Connecticut, in the month of August, A. D. 1800. His parents removed from Connecticut to Camillus, in Onondaga county, New York, in 1806, at which place he commenced the study of medicine in 1820, under the instruction of Dr. Magoon.

After spending four years in study, and attending two courses of lectures at the College of Physicians and Surgeons of the Western District, at Fairfield, Herkimer county, he was licensed to practice in 1824, and soon after came to Havana.

He practiced in partnership with Dr. Hibbard, for two years after arriving at Havana. The remaining thirty-eight years of his residence there, was spent in the active and successful practice of his profession, until within a few weeks of that sad event which produced a profound sensation of sorrow and regret throughout an extensive circle of friends and admirers.

He died August 27th, 1864, where he had lived, labored, and preeminently succeeded, for more than forty years.

Making no pretensions to "scholastic lore,"—seeking no preferment, political or otherwise, at the hands of the community in which he lived, except that reward of merit due an honest and capable performance of the duties pertaining to the avocation of his early choice—his sole endeavor throughout a long and eventful life, was to discharge faithfully and well every obligation that he had assumed by entering that profession for which he ever manifested a most sincere attachment and expressed a deep respect.

Possessed of great powers of endurance, and an active temperament, he was well adapted to perform the labor and duties of a large practice in a "new country." At the time of Dr. Winton's settlement in Havana, the surrounding country was almost an unbroken wilderness, and even the village which he was permitted to see become a "county seat," and the location of printing offices, banks and colleges, was then an "enterprising town of less than a dozen houses." The labors and embarrassments of our fathers in the profession, situated as was Dr. Winton forty years since, are too faintly

realized to-day, when we are engaged in making up our estimate of the character and talent possessed by those who beat the first paths through that wilderness which to us has become as "pleasant places."

Dr. Winton's chief characteristics were his untiring energy, and his entire devotedness to his profession. He early acquired an extensive provincial reputation as a safe and resolute surgeon, and for many years was considered at the head of his profession in that branch of his calling.

In 1824 he was commissioned by Gov. Joseph C. Yates as surgeon's mate. In 1825 he received a commission from Gov. Dewitt Clinton, as surgeon of the 217th regiment of infantry; and in 1833 he was the recipient of a similar appointment from Hon. W. L. Marcy, making him hospital surgeon of the 20th division of infantry. The honorary degree of Doctor of Medicine was conferred upon him in 1844 by the Geneva Medical College, and in 1847 he was elected a permanent member of the Medical Society of the State of New York. In 1857, soon after the erection of Schuyler county, he was instrumental in organizing a county Medical Society, and was unanimously chosen its first president.

Although firmly and steadily refusing all political honors or advancement, he nevertheless took a lively interest in public affairs, whether posessing a local or general character; and when the storm which had so long threatened his fair land, burst forth in all its fury from the dark cloud of rebellion, his country found no truer or braver friend than he. In that gloomy hour of the nation's disaster, when Pope's scattered columns were hurrying toward Washington, he was one of the first to respond to the call for surgeons to take charge of the wounded and dying. Immediately upon receiving the intelligence of his selection as one of the surgeons from his district, he set out for Washington, and was soon busily engaged in charge of a large surgical ward in Harewood Hospital. Here he remained for two or three months, when failing health compelled him to return home.

He probably never recovered from the fatigue and exposure which he underwent while in the service of his country, and went down to his grave with the firm impression that he had shortened his life in his attempt to assist the national cause.

An incident which occurred while he was in or about Washington, not only exhibits his patriotism, but illustrates the character of the man. At one period during his stay in the hospital, it was rumored that Gen. Lee was in Maryland, and there would probably be a battle fought near the city. Upon hearing this report, the Doctor, all enthusiasm, sprang to his feet and remarked to his companions, four or five in number: "*Let each of us obtain a gun and go out and*

fight on our own 'hook,' since I would rather be killed upon the field of battle than outlive the union of the States."

Unfortunately he was not permitted to behold that Union so fully restored as he most earnestly desired, but he left behind no word or act of his to prejudice its cause.

In 1829 he was married to Miss Lucy Goodrich, a lady of rare talents and accomplishments, with whom he spent the entire period of his married life. There were born of this union one son and three daughters, all of whom survive to lament an honored husband and father. His eldest daughter is the wife of Dr. S. B. Sheardown, who is now an acting brigade surgeon in Gen. Thomas' army.

The only employment that Dr. Winton ever allowed to share his time or attention with professional duties, was an occasional hour spent in his vineyard or orchard. He was exceedingly fond of horticulture; and his beautiful grounds, his well-trained trees, and thrifty vines, while they were objects of admiration to all who had the pleasure of beholding them, afforded example worthy of imitation by those who had much more time than he to employ in such pursuits.

We have thus given a brief and imperfect outline of the character and labors of one of the most industrious and successful physicians in his own or adjoining counties. Claiming no superiority for himself, he was almost universally respected by every member of the profession with whom he became acquainted.

Without the advantages of a thorough course of literary training, he was remarkably well read in the literature of that science which he made a life-long study. Deprived of those especial privileges for the study and practice of surgery which can be obtained in the larger cities, he nevertheless obtained a wide reputation as a surgeon, and performed successfully some of the most important and difficult operations, one of which (ovariotomy), was reported at length in the Transactions of this Society for 1857. The complete success of this operation led to repeated calls to perform others, and during the weeks previous and subsequent to his death—in a period of fourteen days—there were four requests sent to his office soliciting him at his earliest convenience to attempt the performance of this formidable operation—two of which came from distant States.

Always ready and cheerful to render every assistance in his power to the younger members of the profession, and professing a lively interest in the welfare and progress of medical students, of whom he had for many years a large number in his own office, he was particularly endeared to the young men of his county. And finally, faithful, competent, and energetic in the performance of every duty, it was truthfully remarked at the services of his burial, "A useful and good man has died."

ARTICLE XXVIII.

BIOGRAPHICAL MEMOIR OF PELATIAH BROOKS, M. D.

By Dr. J. G. Orton, of Binghamton, N. Y.

It is indeed a sad occasion that calls upon us to record the removal from our midst by the hand of death, our associates in the walks of life, and especially those united to us in the bonds of professional brotherhood.

The biographical notices annually presented of deceased members of this society, admonishes us that we must all die, the young, the aged and the learned. In the death of the fathers in our profession, those who have labored through a long life of usefulness and attained the ranks of honor and distinction; the true magnitude of our loss is concealed in our admiration of their character and strife to emulate their example. But in the death of those just entering upon a bright career of life's noble purpose; there is a peculiar sadness in the contemplation forced upon us, of the fond hopes of the future buried in the grave.

Pelatiah Brooks was born in Lisle, Broome county, N. Y., on the 13th of September, 1825, and having removed to Binghamton, N. Y., in 1836, he pursued the study of medicine with his father, Dr. Pelatiah B. Brooks, who still survives him, and is now at the age of 77 quite actively engaged in the practice of medicine and surgery, to which he has devoted a long life of usefulness with honor to himself and the profession of his choice.

The subject of this memoir, after a thorough course of study, attended lectures at the College of Physicians and Surgeons, New York, graduated at that institution in 1850, and commenced the practice of medicine and surgery in connection with his father, at Binghamton. In June 1855, he entered into partnership with the writer of this notice. The most intimate relations of friendship and confidence subsisted between us without interruption until the time of his death, which took place at Nashville, Tenn., on the 2d day of March, 1864.

About the first of January, 1863, it was apparent to Dr. Brooks, as well as to his friends, that disease had marked him as a victim, and upon examination it proved to be Bright's disease of the kidneys. He consulted Dr. Alonzo Clark of N. Y., and other distinguished physicians, who could only corroborate the same sad conclusion.

During the winter of 1863 he sailed for Havana, Cuba, and remained in that city and at Key West until spring, when he returned to his home somewhat apparently improved. He occasionally wrote prescriptions during the following summer, but declined general practice, and seemed to be gradually gaining in flesh and strength. But as cold weather again appeared, he longed for a more genial climate, and having about that time received an invitation to the position of surgeon in charge of the "Construction Corps," for Tenn., he accepted, and left his home and friends for the last time, in the month of January, 1864. The exposures of camp life, and his desire to fulfill the duties to which he was assigned, doubtless aggravated his disease, and compelled him to leave the field of his labors. He endeavored to reach his home, but this was denied him, he only succeeded in reaching Nashville, Tenn., where he died as stated, on the 2d day of March. 1864.

It was a source of great consolation to his relatives and friends, to learn that he received every attention from his former townsmen Drs. E. J. Ford and Charles J. Seymour, surgeons U. S. A., stationed at that city. The wife of Dr. Ford truly acted the part of a sister, in her constant attentions and endeavors to sooth the bodily agony of his last hours, and in her christian conversation and singing of appropriate hymns, directed his thoughts to the Great Physician. She received from him the assurance that he trusted alone in his Saviour.

His remains were forwarded to Binghamton, and now rest in "Spring Forest Cemetery." Dr. Brooks early became a member of the Broome County Medical Society, and represented it in this body in 1860, and was elected a permanent member in 1861. He was also a member of the Binghamton Academy of Medicine, and of the Medical Association of Southern Central New York. He held at the time of his death a commission from the Governor of this State as surgeon to the 44th militia regiment.

As a practitioner of medicine and surgery Dr. Brooks occupied a high and prominent position, and was regarded by all who knew him both in and out of the profession, as a safe and prudent counsellor. Possessing a good share of pleasant wit and humor, courteous and affable in his demeanor, with a mind well stored with general and medical literature, he was universally esteemed and respected by his medical compeers, and did not fail to secure the good will, confidence and sincere respect of all with whom he was associated, or on terms of intimacy.

ARTICLE XXIX.

MEMOIRS OF JAMES STEWART, M. D.

By Charles A. Lee, M. D.

James Stewart was the son of Charles Stewart, Esq., a wealthy and highly respected merchant of New York city, and was born April 7th, 1799. He died September 12th, 1864, aged 65.

Born of wealthy parents, and moving in the highest circles of society, he enjoyed the best advantages for education which the city afforded. In addition to the facilities furnished by the best public institutions, he was also favored with private instructors of the highest reputation, and although he did not go through a regular course of collegiate study, his education was probably as finished, and in some branches more thorough, than if he had completed the ordinary routine of college requirement.

Dr. Stewart commenced life as a wholesale druggist, in Maiden Lane, New York, in partnership with Dr. John Ellis, about the year 1820. It is believed he had no special training for this business, in which he invested a large amount of capital. This enterprise having proved, in the course of two or three years, unfortunate and disastrous, having lost his entire capital invested, he entered at once upon the study of medicine, which he pursued with great ardor and diligence for the usual period, and after attending two courses of lectures in the College of Physicians and Surgeons, graduated in that institution about the year 1824.

He soon afterward entered upon the practice of his profession in the city of New York, and soon succeeded in gaining the confidence of a wide circle of acquaintances. He married a most estimable and amiable young lady, Miss Cushman, early after engaging in practice, by whom he had four children—one son and three daughters—who survive him.

Commencing practice in the ninth ward of the city of New York, his attention was early called to the large amount of poverty and suffering in that portion of the city, and especially the want of medical attendance for the sick poor; and in connection with the writer of this article, in the year 1827, he founded the Northern Dispensary* of that city, of which he was one of the attending physicians

* Incorporated Nov. 28, 1823.

for several years, and afterwards, till the close of his life, one of the counseling board.

In the discharge of his professional duties, Dr. Stewart was remarkably assiduous and faithful. His characteristic benevolence here found free scope for its widest exercise, and the more destitute and needy the sufferer, the more constant and devoted were his attentions. Associated with him daily for several years in professional duties, we can cheerfully testify to the gentle, kind deportment of our friend in the chamber of disease; his tenderness of heart; his ever conscientious fidelity to what he conceived to be his duty; his vigilant, untiring faithfulness, and his sincere religious convictions. He was a Christian gentleman of the truest, highest stamp—honorable, honest, truthful, candid, ingenuous. We have never known a practitioner so perfectly free from all ambitious aspirings, or professional jealousies. Modest, retiring, morbidly sensitive and self-distrustful, he greatly lacked those positive and showy qualities which inspire confidence, and which are essential in securing a very lucrative practice. He had such an open contempt for quackery of all kinds, as well as all the usual arts and tricks for obtaining practice, that he went to the opposite extreme, and underrated his own knowledge and skill. So far from even promising cures, he almost always represented the case in a more unfavorable light than it deserved. Rarely did he give a favorable prognosis in any very severe case of disease; and recoveries he was apt to attribute to the conservative powers of nature rather than drug-medication. In fact he was somewhat sceptical as to any specific power in drugs. He belonged more to the physiological and pathological than any other school of practitioners. He apparently took more satisfaction in ministering to the poor and humble, in filthy basements and garrets, than to the rich in their splendid and luxurious palaces; and his satisfaction grew out of his ever active, benevolent feelings, and pure religious motives. From the former class he was never known to take compensation, even when offered—looking for reward, like the illustrious Boerhaave, to a Higher Paymaster. Though ever humble in his pretensions, and self-distrustful of his own powers and acquirements, his mind was of too noble and lofty a character to suffer him to avail himself of adventitious circumstances to obtain the favor of the community; and he ever seemed to scorn even the appearance of seeking to win that favor by any other means than his own honest merit. Endowed by nature with an exquisitely sensitive and nervous temperament, he was through life inclined to take a sombre view of his future prospects, and as he advanced in years, his hypochondriacal feelings often obtained the mastery over him, and

he may perhaps be said to have become to a considerable extent misanthropical. To the same temperament to which he owed his splendid genius, taste and refinement, he was also indebted for the great mental suffering which he often underwent; showing that the greatest mental endowments are frequently purchased at a high price. The sensitiveness of Dr. Stewart's nature did not allow him to become a practitioner of surgery, and it was with the greatest repugnance, if not disgust, that he could witness a severe surgical operation.

In forming a medical diagnosis he was extremely slow and cautious. Possessing an uncommonly fine ear for music, he greatly excelled in physical exploration of the chest, and his opinion was very rarely found erroneous, even in the most obscure affections of the heart or lungs. To these affections he paid special attention during several years of dispensary practice, and it is believed that no practitioner of New York city for many years excelled him in accuracy of diagnosis in diseases of this class.

Another class of diseases which constituted a special study with Dr. Stewart was that of children. His long devotion to dispensary practice was partly to afford him opportunities of investigating such affections, and he improved them to the utmost. He embraced every opportunity for autopsic examinations, and kept an accurate history of every case treated. His essay on "*Cholera Infantum*," which was crowned by the New York Academy of Medicine with their highest prize, is simply a record of facts and experiences gathered at the bedside through a long series of years in treating this disease.

In the year 1839 Dr. Stewart first became known to the profession as an author, by the publication of his translation of M. Billard's treatise on "*The Diseases of Children*," with an appendix of nearly 100 pages of original matter. This translation, as is universally admitted, is one of the most accurate, as well as elegant, ever made of any scientific French work into the English language. The editor of the *Medico Chirurgical Review*, of London, speaking of it, says: "Of the manner in which Dr. Stewart has executed his task, we can speak in the highest terms. He has not only rendered the author's meaning faithfully, unaccompanied by the gallicisms, which it would seem to be the aim of our translators to introduce rather than avoid; but he has in some measure compensated for the deficiencies of the author, by a very able appendix upon the treatment of various diseases."

The literary taste and acquirements of Dr. Stewart were of the very highest order. As a writer of pure and elegant English, he has had few, if any superiors, perhaps, in our profession, either in Great Britain or the United States. There is a classic elegance, simplicity

and purity in his style, which is rarely met with in professional writers. His knowledge of the French language was very extensive. He wrote and spoke it like a native Parisian. His style was modeled on the best of the Greek and Roman classics which early study had rendered familiar to him. By long cultivation and assiduous practice, he had made their style his own. The translation of Billard met with great success, so that a new edition was speedily called for; one reason, undoubtedly was, that the field chosen was new, not having heretofore received the attention of any who have occupied themselves in the investigation of pathological truths. While the fact that each texture possesses, equally with its particular species of vitality, its own peculiar diseased action, had been proved by others, Billard dwelt especially on the fact, that the period of life exercises also an important influence in the development of morbid affection. To develop this truth was also one of the chief objects which Dr. Stewart had in view in preparing his celebrated treatise on "*The Diseases of Children*," which was first published in 1841, and a second edition in 1843.

Dr. Stewart, as has already been stated, had for many years made that branch of medicine which embraces the consideration of children's diseases, a subject of special research and study, but with a full knowledge of what had been written, both in Europe and this country on this subject, he thought that the time had come when the whole topic of disease at the important period of childhood, should be presented in a concise form; especially as the actual condition of disordered parts, the result of morbid action, had of late, especially in France, received more than ordinary attention from the cultivators of pathological anatomy; a new era almost having commenced in the investigation of the diseases of man during the important period of growth. Dr. Stewart, therefore, believing that the object of all medical inquiry should be to apply the results of such investigations to strictly practical purposes, an object often disregarded by French pathologists, undertook to condense existing knowledge from facts, both from his own observation, and the recorded experience of others, and thus present, without the detail of cases, a treatise on the affections of children, in which the subject might be considered with a direct practical bearing. I need not speak of the manner in which this task was executed, as the work took its place at once, as the leading standard treatise on "*Diseases of Children*," not only in this country, but throughout Europe. In Great Britain it took precedence over all others, as I can testify from personal knowledge, and it still enjoys a reputation in that kingdom second to no other. In France and Germany it is also nearly equally well known and esteemed.

It may be said, with entire truth, that there is no American medical writer who enjoys a more enviable reputation abroad than Dr. James Stewart; nor, has any of our native authors a reputation which is likely to be more durable than his. His works, above mentioned, may, in the progress of medical science, be, to some extent, replaced by others; but they can never be wholly superceded, inasmuch as they are based on established pathological facts and clinical experience, which do not vary from age to age. Although twenty-four years have elapsed since the treatise on "Diseases of Children" was first published, and other more recent works on the same subject have been issued, it still stands its ground, as one of the principal standard works on this class of affections, and has lost no portion of the popularity with which it was received at first.

The next work which was prepared by Dr. Stewart, was entitled "*The Lungs, their uses, and the Prevention of their Diseases, with Practical Remarks on the use of Remedies by Inhalation.*" 12 mo. pp. 100. This was issued in 1848, and like his other previous publications, was very favorably received by the profession. It was a duodecimo volume of about one hundred pages, containing many valuable directions respecting the proper use of the lungs for the prevention of the various diseases to which those organs are subject, together with the result of the author's experience in the use of inhalations, which he had employed extensively for many years. Dr. Stewart, in the course of his professional experience, had enjoyed extensive opportunities of making himself acquainted with the effects of various professions, arts, trades and callings on the respiratory organs, and the importance of full, free and profound inspiration in maintaining the health of the body; these opportunities he had diligently improved and he presented the results to the profession in this work. It will be no more than truth to say, that it will be difficult to find in any language, a greater amount of useful facts and information on the subject treated of, condensed within the same space, and it bears the marks of the same philosophical, logical, and practical mind which characterize all the other productions of the author.

In addition to the above, Dr. Stewart prepared a very elaborate and able popular work on Hygiene; presenting the whole subject in a novel and highly interesting light. It would have formed a duodecimo volume of some 400 pages, when printed. This work was offered to the Messrs. Harpers for publication, at a time when they were crowded with other work, and when they supposed that the works of Combe, Dunglison and others, fully supplied the popular wants on these subjects, and they consequently declined undertaking it. I tried to persuade the author to offer the manuscript to some

other publishing house, but his sensibilities had been too deeply wounded, and he committed the work to the flames. Having been permitted to examine the manuscript, I have no hesitation in saying, that in its destruction, the public has sustained a severe, if not irreparable loss.

Besides the formal treatises above mentioned, Dr. Stewart was the author of several able articles and reviews in different medical journals. They all evince a practical, rather than a speculative or theoretical turn of mind, and are distinguished for their originality and practical bearings. We may specify, in particular, his prize essay on "*Cholera Infantum*," his essay on "*Dropsy following Scarlatina*," in the third volume of the "New York Journal of Medicine;" and his paper on "*Animal Food in Cholera Infantum, and the Summer Complaints of Children*," and his "*Remarks on the Resuscitation of Persons Asphyxiated from Drowning*," in the same journal. All these essays, as well as several others, of which he was the author, abound in original practical suggestions of the highest importance, which have been since widely introduced into practice.

About the year 1853 Dr. Stewart originated a plan for the establishment of a "*hospital for children*," and by his writings and personal appeals, interested some of the most wealthy and influential citizens of New York, in favor of the project. An act of incorporation was granted by the Legislature; liberal subscriptions obtained; and the institution went into successful operation in 1854, under the name of the "*New York Nursery and Child's Hospital*." This continues one of the most useful and popular charities of the city.

The above constitute the most important of Dr. Stewart's labors as author and philanthropist. They, however, give but a very imperfect idea of the vast amount of active effort he underwent in the various spheres of private and public benevolence. Though often urged, he had no ambition to engage in the business of teaching publicly any of the branches of medical science. No one but himself ever doubted his superior qualifications to excel in this department. But his modest, sensitive nature shrunk from every public exhibition of himself; he lacked confidence even to preside at a small medical meeting, or take part in medical discussions. Hence he avoided connecting himself with medical societies and associations; and of the numerous literary, scientific, and social clubs of New York, it is believed he belonged to none, but the "Medical Society of the City and County," membership of which was made obligatory by a law of the State. Owing to these reasons and his limited practice, Dr. Stewart was very little known to the medical men of the city, except as an author; and it was worthy of note that but few of the profes-

sion were present at his funeral. He had anticipated this, for he once said to the writer, with a very sad expression, "when I die, there will be few, if any doctors to see me buried." He surmised that his recluse, unsocial habits for many years previous to his death, had made him a stranger to the profession, and that personally they took but little interest in him. I replied that, "if I should survive him, I would would follow him to his last resting place," which it was my melancholy duty to perform on the 14th of September last, when the Right Rev. Horatio Southgate, of whose church he was a worthy member, performed over his remains the sublime "burial service for the dead," at the cemetery of St. Luke's Church, where they were deposited in his family vault.

As one of his most intimate professional friends, enjoying his confidence, intimacy and friendship, for a long succession of years, I may be pardoned for dropping a tear over his grave, and offering this feeble tribute to his memory. It is my firm conviction that the world has few nobler spirits than was his; and that our profession has rarely been able to boast a more talented member; or been adorned with a more brilliant genius, or a more philanthropic heart, than beat in his bosom. So far as the accumulation of wealth is deemed necessary to make a successful practitioner, Dr. Stewart can not be said to have been successful; indeed his life must be regarded as a failure. But if he is the successful physician who gains the esteem and love of his fellow-men; the sincere affection of the poor, and the humble; the applause and veneration of the wise and good; the approbation of his own conscience, and the blessing of Heaven; then may he be pronounced one of the most successful of practitioners.

Upon the death of Samuel Foory, M. D., in 1845, Dr. S. was appointed chief medical examiner to the "Mutual Benefit Insurance company of New Jersey," whose principal office is in New York. Under his judicious and able management, this company has proved one of the most successful, if not the most so, of any of a similar kind in the United States, and it is to be hoped that his extensive statistical and other researches on Life Insurance, to which his attention was almost exclusively directed for the last few years of his life, may yet be published. So valuable were his services considered by the managers of the company, that they voluntarily increased his salary from time to time, till, at length his compensation is believed to have exceeded in amount that of any other examining physician in the city.

Such, in brief, is the record of the life of James Stewart. It occupies but few pages on paper, but it was extended over 65 years, a majority of them of active usefulness. He sought not the applause

of men, but only the approval of a higher power and of his own conscience. He courted not what is called popularity, nor even fame; though he valued, as every rational man should, the good opinion of his friends; he set no high estimate on any of his literary performances; so far from it, no one underrated them but himself; he never deprecated but invited criticism; his supreme motive in all he did, was to benefit his fellow men. From what has been said, no one will be surprized that he was not appreciated as he deserved to be, during life, by the profession—neither medical nor any other honors except the prize from the Academy of Medicine * were ever conferred upon him; so far from seeking or desiring them, he would have declined them if offered; his great desire was to live and die as privately as possible, consistent with his ever active desire to do all the good in his power. He participated in no public amusements; balls, parties and assemblies he wholly ignored; his passionate fondness for music may possibly have led him occasionally to the opera, but of this I have no knowledge. He was a most accomplished performer on the flute, and nothing delighted him more than to join in a spontaneous domestic concert with his highly educated and talented daughters, in the fine operatic pieces of Mozart, Donizetti, Mendelss, and Bellini. In these performances his chief enjoyment consisted, and who can deny that it was of a purer, higher nature than can be derived from other and more public sources.

During the last ten years of his life, Dr. Stewart, with the exception of his professional duties at the insurance office, which occupied about three hours each day, and attention to a limited but select practice, led a very secluded and domestic life. With three exceptions, it is believed he never left the city of New York and its vicinity. The first was when he made a short bridal tour, in early life; the second when he accompanied his wife to the south on a trip for her health, and the third a visit to Philadelphia, when writing his work on "Diseases of Children," to collect statistics in regard to small-pox and vaccination. For twenty-five years it is said he scarcely went outside of the city limits. Of course he never made excursions for health or pleasure. Our fashionable watering places he never visited. He had no desire to travel or visit foreign lands—he had no relish for natural scenery, owing, doubtless, to his imperfect vision and short-sightedness. His was the inner life—subjective, not objective.

We should fail to give a complete sketch of the subject of our memoir, did we not refer, however briefly, to his religious belief and character. Born, baptized and educated in the Episcopal church, to

* This prize of $100 was relinquished to the Academy.

which his parents belonged, he was devoutly attached to her communion, her doctrines, discipline, liturgy and articles. In her he professed to find a steadfastness of faith, a purity of doctrine, a grandeur of worship, and a moral power, possessed by no other church in the whole world. And he showed his faith by his works. A more sincere and devoted Christian, judging him by his life, it would be difficult to find. He said little of his religious experience. He shrunk from any noisy outward professions of piety. Religious belief and character, he thought, should be judged of by the daily conduct and the life of each individual. While ardently attached to his own church—a churchman of the Bishop Hobart stamp—he was, like him, entirely evangelical in his creed; regarding with the utmost charity all Christian denominations, he refused not fellowship with any, who hold to the great leading doctrines of orthodox Christianity. Since early childhood he had been a regular communicant in the church, and a regular attendant upon her services, not only of the Lord's day, but also of daily morning and evening prayer, which was ever a source of joy, delight, and comfort to him; and he never allowed any business whatever, if possible, to interfere with his attendance.

The following prayer, from the office of "visitation of the sick," which was perhaps more frequently on his lips than any other, we have every reason to hope has been fully answered:

"O God, whose days are without end, and whose mercies cannot be numbered, make us, we beseech Thee, deeply sensible of the shortness and uncertainty of human life; and let Thy Holy Spirit lead us through this vale of misery, in holiness and righteousness, all the days of our lives: that, when we shall have served Thee in our generation, we may be gathered unto our fathers, having the testimony of a good conscience; in the communion of the catholic church; in the confidence of a certain faith; in the comfort of a reasonable, religious, and holy hope; in favor with Thee, our God, and in perfect charity with the world."

Dr. Stewart was highly blessed in his domestic relations. His wife was lady-like, amiable, and well educated—domestic in her tastes and habits, benevolent, and sincerely pious. She fell a victim to phthisis some fifteen years ago, and the Doctor, as is believed, from a deep regard to her memory, remained a widower ever after. He was an affectionate husband and a kind and indulgent parent.

In person Dr. S. was somewhat below the medium height; compactly formed, but growing considerably robust and stocky as he grew older. His features were expressive and intelligent, with a remarkably well-developed, large, and intellectual head. His vision was, however, defective, being quite near-sighted, which made it

necessary for him at all times to wear glasses. His manners were prepossessing and agreeable, and though silent among strangers, with his acquaintances and friends he was highly sociable and communicative, his powers of conversation being of a very high order. Possessing a highly retentive memory, and having been a great reader, he could always make himself interesting and instructive. His favorite books were the Bible, Shakespeare, Walter Scott, and the great classic writers of England. For newspapers, novels, and what goes under the name of light literature, he had little or no relish. His constitution was good, and his habits generally active. He enjoyed almost invariably good health until two or three years previous to his death, when, from loss of teeth, he was unable to masticate his food sufficiently. Being a hearty eater, it is believed he brought on indigestion from swallowing his food without sufficient mastication. This, in connection with sedentary habits, great mental toil, and probably more or less mental anxiety, induced an attack of epilepsy. These attacks increased in frequency and severity; he gradually lost flesh and spirits, though able to attend to his duties as medical examiner, until last July, when he retired to the country to recruit for a few weeks. There his attacks recurred with increased severity, in connection with fever and impaired respiration, under which he gradually but slowly succumbed. His end was peace.

PEEKSKILL, *Jan. 26th*, 1865.

ARTICLE XXX.

Medical Society of the State of New York. Fifty-eighth Annual Meeting. Abstract of Proceedings.

The Society met pursuant to statute, in the City Hall, Albany, at 11 o'clock on Tuesday, February 7th, 1865, and was called to order by the President, Dr. Frederick Hyde, of Cortland.

Prayer was offered by Rev. Mr. Twombly.

There were present and took their seats the following

PERMANENT MEMBERS.

Drs. Frederick Hyde, President,
George J. Fisher, Vice-President,
Sylvester D. Willard, Secretary,
J. V. P. Quackenbush, Treasurer,
Charles M. Crandall,
Nathaniel C. Husted,
Samuel A. Purdy,
Edward Hall,
Barent P. Staats,
William Rockwell,
Hiram Corliss,
William Govan,
John E. Todd,
Henry W. Dean,
Abraham Haun,
Alden March,
Augustus L. Saunders,
James H. Armsby,
J. G. Snell,
Edward R. Squibb,
James Ferguson,
C. V. Barnett,
Howard Townsend,
Thomas C. Brinsmade,
S. M. Van Alstyne,
Edward H. Parker,
Henry C. Gray,
Freeman Tourtelot,
Samuel H. Freeman,
William H. Bailey,
John [illegible] Burnc,
Joseph [illegible]es,
Drs. Horace K. Willard,
S. Oakley Vanderpoel,
Austin White,
James Lee,
A. D. Hull,
Henry S. Downs,
J. H. Wheeler,
William Tibbitts,
A. Crispell,
Thomas W. Blatchford,
George Burr,
Peter McNaughton,
James Thorn,
Daniel P. Bissell,
Alexander Thompson,
Alexander Ayres,
Taber B. Reynolds,
Henry A. Carrington,
Peter Van O'Linda,
Harvey B. Wilbur,
Joseph C. Hutchison,
S. G. Wolcott,
Augustus Willard,
J. H. Reynolds,
Philander Stewart,
E. Simpson,
James McNaughton,
Thomas Hun,
John H. Griscom,
Darius Clark,
Charles McMillan,
William P. Seymour.....64

DELEGATES.

Albany County Medical Society.....	Levi Moore, Albany.
	Peter P. Staats, Albany.
	John V. Lansing, Albany.
	James L. Babcock, Albany.
Allegany County Medical Society...	
Broome County Medical Society	W. S. Griswold, Binghamton.
Cattaraugus County Medical Society.	
Cayuga County Medical Society	Samuel Gilmore, Fosterville.
	Joseph G. Richardson, Union Springs.
Chautauqua County Medical Society.	Julian T. Williams, Dunkirk.
Chemung County Medical Society...	
Chenango County Medical Society ..	H. K. Bellows, Norwich.
Clinton County Medical Society.....	
Columbia County Medical Society...	Volkert Whitbeck, Hudson.
Cortland County Medical Society....	D. W. Burdick, Preble.
Delaware County Medical Society...	Calvin C. Covel, Stamford.
Dutchess County Medical Society ...	
Erie County Medical Society	C. C. Wyckoff, Buffalo.
	Sanford Eastman, Buffalo.
Essex County Medical Society	William H. Richardson, Westport.
Franklin County Medical Society ...	
Fulton County Medical Society.....	
Genesee County Medical Society....	
Greene County Medical Society	B. S. McCabe, Greenville.
Hamilton County Medical Society ...	
Herkimer County Medical Society...	J. E. Casey, Mohawk.
	Griffin Sweet, Fairfield.
Jefferson County Medical Society....	
Kings County Medical Society....	A. N. Bell, Brooklyn,
	Chauncey L. Mitchell, Brooklyn.
Lewis County Medical Society.....	C. D. Budd, Turin.
Livingston County Medical Society..	
Madison County Medical Society....	James Whitford, De Ruyter.
	H. S. Crandall, Leonardsville.
Monroe County Medical Society	
Montgomery County Medical Society.	Israel I. Bucklee, Fonda.
New York County Medical Society ..	James Kennedy, New York.
	John R. Van Kleek, New York.
	D. S. Conant, New York.
	Jerome C. Smith.
Niagara County Medical Society....	
Ontario County Medical Society....	William T. Swart, Canandaigua.
	H. N. Eastman, Geneva.
Oneida County Medical Society	John P. Gray, Utica.
	Alonzo Putnam, Rome.
Onondaga County Medical Society	Wm. Manlius Smith, Manlius.
	Israel Parsons, Marcellus.

Orange County Medical Society.....Avery Cook, Otisville.
Orleans County Medical Society ....
Oswego County Medical Society ....S. J. Green, Parish.
Otsego County Medical Society .....
Putnam County Medical Society ...
Queens County Medical Society.....
Rensselaer County Medical Society..Harvey W. Fowler, Hoosic Falls.
E. W. Carmichael, Sand Lake.
Richmond County Medical Society ..
Rockland County Medical Society...
St. Lawrence County Medical Society.Darius Clark,* Canton.
Saratoga County Medical Society ...L. B. Putnam, Saratoga Springs.
M. H. Colby, Dean's Corners.
Schenectady County Medical Society.
Schoharie County Medical Society...John Pinder, Schoharie.
Schuyler County Medical Society ...
Seneca County Medical Society .....
Steuben County Medical Society ....
Suffolk County Medical Society .....
Sullivan County Medical Society ....William L. Appley, Cochecton.
Tioga County Medical Society.....
Tompkins County Medical Society...J. S. Wiedman, Etna.
Ulster County Medical Society.....Augustus Hutine, Rondout.
John V. Holt, Amesville.
Warren County Medical Society.....E. W. Howard, Warrensburgh.
Washington County Medical Society.
Wayne County Medical Society.....E. W. Bottum, Lyons.
Westchester County Medical Society.Edmund S. F. Arnold, Yonkers.
Jas. Hart Curry, Shrub Oak.
Wyoming County Medical Society ..
Yates County Medical Society .....
Albany Medical College .....
Academy of Medicine .....Oliver White, New York.
John P. Garrish, New York.
Bellevue College Hospital.....Isaac E. Taylor, New York.
College of Physicians and Surgeons..E. L. Beadle, New York.
University of New York.....
Long Island College Hospital .....
University of Buffalo .....Sanford Eastman,† Buffalo.
Geneva Medical College .....E. P. Allen, Athens, Pa.....54

INVITED MEMBERS.

Hiram McNutt ... .Warrensburgh, N. Y.
F. W. Root.....East Hamilton, N. Y.
W. J McDermott.....Assistant Surgeon, U. S. Vols,
M. H. Burton.....Troy, N. Y.

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* Permanent Member.
† And Erie County Medical Society.

E. Lee Jones .....New York City.
George W. Little .....
A. Irving Sternberg..... ....Glens Falls.
A. J. Long ... .Whitehall, N. Y.
Henry D. Noyes.....New York City.
N. E. Sheldon.....Glens Falls.
Peter V. S. Pruyn.....Kinderhook.
Eben S. Smith .....Of the Legislature.
Asabel Perry.....South Easton.
Le Roy McLean .....Troy.
George H. Hubbard .. ..Surgeon U. S. V.
J. R. Boulware.....Albany.
Theodore H. Cooper.....Of the Legislature.
Peter Wilson .....Six Nations of N. Y. Indians.
Archibald Gow .....Schuylerville.
H. P. Tolman .....Jamesville.
Henry S. Case.....Albany.
C. A. Robertson .....Albany.
Edward Duffey .....Albany.
William Sigsbee, Jr.....Knox.
F. L. R. Chapin.....Albany.
M. R. Holbrook.....Poughkeepsie.
Martin L. Mead.....
Leonard G. Warren .....Albany. 28

Medical Society of New Jersey.

John W. Hunt .....Jersey City.

Medical Society of Pennsylvania.

George F. Horton .....Ferrytown, Pa.
Edward Wallace .....Reading, Pa.
Calvin C. Halsey .....Montrose, Pa.

Connecticut Medical Society.

Josiah G. Beckwith.....Litchfield, Conn.

Connecticut River Valley Medical Association.

Benj. F. Ketchum.....

Medical Society of South-western New York.

Edson Boyd.....Chautauqua County.

Massachusetts Medical Society.

J. Leland Miller .....Pittsfield, Mass.....8

Total.....154

Many who started to attend the meeting did not reach the city on account of the obstruction of the roads by snow.

Dr. Hyde read the following inaugural address :

Gentlemen of the Society :

While we have come again to that prominent way-mark made by another year's history of our Society, whether our thoughts be retrospective or onward, we cannot but lift our hearts in gratitude to Almighty God, whose merciful care has permitted us to repeat our annual gathering ; it may be to rededicate ourselves to the service of the medical profession.

Between our last and the present meeting, our ranks have been signally

protected from all calamitous visitations disqualifying for useful labors, and lightly too have we felt the fell destroyer's hand.

We have ample cause if need be, for renewal of attachments to our profession, when we remember that amid the bloody conflict now progressing in our country, true to its own genius, it continues steadily its mission, administering in its peculiar catholic spirit most freely to all, caring only to know that they are subjects for its kindly purposes.

As in its former history, so has it in the present crisis, sought with great industry to qualify itself to discharge its duties in keeping with all emergencies.

The present condition of our Society in its relations to the advancement of the interests of the medical profession of the State, will compare favorably with any former period.

In consideration of the salutary influence resulting to the medical profession through its associated labors, it is to be regretted that so large a proportion of its members in the State, have no voice in this representative body.

In several counties in which flourishing medical societies once existed, they are now extinct, and in some others, still maintaining their organizations, they are little more than nominal, since but a fraction of the physicians are members of them, and they do not send delegates to this Society.

Some of the voluntary associations in our State, more especially the offspring of the benign spirit of the American Medical association, continue their valuable labors with unbroken prosperity, while others have abandoned their organizations.

Since the principle of association has been so well tested, and its power to elevate and develope the character of our profession so abundantly illustrated, is it not the duty of this society to endeavor by all the means in its power to bring the physicians of our State more largely under its influence?

It is possible the creation of the several associations in various parts of the State, in obedience to the spirit of voluntary actions, may have given rise to the belief that these were to supercede the necessity of county medical societies.

Without affirming that the statute authority, which underlies the structure of our State society, ensures it an element of perpetuity, not found in the plan of voluntary compact, we may assert that it contemplates no narrower limits in its provisions, than the medical profession of the State.

It can scarcely be doubted that in proportion as our State organization extends its limits, will voluntary societies acquire a more permanent life, and perfect, to a higher degree, the objects of their creation.

Then, while this society ought to embrace within its corporate boundaries, a larger representation, so should it encourage voluntary organizations.

Well aware as I am that repeated efforts of this body have been made to bring within itself sections of the profession, now destitute of its advantages, still, I would suggest, that it renew its exertions through such plan of action, as its wisdom shall devise, for a more successful accomplishment of this desirable object.

It is to be hoped, since we have so fully realized the salutary social influences, growing out of the intercourse between this and other State Medi-

cal societies, through visiting representatives to, and from these bodies, that the practice of electing delegates will be continued.

Finally; if it be honor enough to serve in the humblest capacity of a member of this Society, how shall he feel who accepts the confident tender of its choicest, its highest honor?

Gentlemen; while I give to you the warmest thanks of my heart for the distinguished position your counsels so generously assigned me, be assured my earnest wish is, that I may duly estimate and meet its responsibilities.

The President appointed the following committee on credentials:

Drs. Hiram Corliss, Wm. Rockwell, and S. D. Willard.

Dr. March presented Dr. Knowles from the Vermont Medical society.

Dr. Crandall presented the following:

Resolved, That the chair appoint a committee of three to extend an invitation to such members of the Legislature, as belong to the medical profession to attend the meetings of the Society during its session.

The Chair appointed Drs. Crandall, A. L. Sanders, and B. P. Staats, such committee.

Dr. Quackenbush, the treasurer, presented the following report:

TREASURER'S REPORT.

ALBANY, *February* 7, 1865.

The Treasurer submits the following report of the condition of the funds of this Society:

1864.

Balance in the treasury at the last annual report.....				$317 71
Received from—				
February 4.	Monroe Co. Medical Society, per Dr. Bly.....			5 00
4.	Academy of Medicine, per Dr. O. White.....			5 00
4.	Warren Co. Medical Society, per Dr. Howard....			5 00
4.	Sullivan	do	do Appley	5 00
4.	Orange	do	do Cook	5 00
4.	Westchester	do	do Arnold.....	5 00
4.	Genesee	do	do Root	5 00
4.	Geneva Medical College			5 00
4.	College Physicians and Surgeons, per Dr. Beadle			5 00
4.	New York Co. Medical Society, per Dr. Doremus..			5 00
4.	Queens	do	do Ordronaux	5 00
4.	Saratoga	do	do Reynolds..	5 00
4.	Kings	do	do Squibb....	5 00
4.	Ulster	do	do Holt.....	5 00
4.	Rensselaer	do	do Carmichael	5 00
4.	Albany	do	do Bailey.....	5 00
4.	Albany Medical College, per Dr. Quackenbush...			5 00
4.	Westchester Co. Med. So'ty, per Dr. Curry.....			5 00
4.	Ontario	do	do Hayes.....	5 00
4.	Cayuga	do	do Van Anden..	5 00
4.	Bellevue College Hospital, per Dr. Sayre.....			5 00

February	4.	Herkimer Co. Med. So'ty, per Dr. Curry			5 00
	4.	Richmond	do	do Anderson	5 00
	4.	Schoharie	do	do Pindar	3 00
	4.	Courtland	do	do Bradford	3 00
	4.	Otsego	do	do Searing	3 00
	4.	Greene	do	do Botsford	3 00
	4.	Rockland	do	do Hasbrouck	3 60
	4.	Schuyler	do	do Fish	3 00
	4.	Essex	do	do Barton	3 00
	4.	Wayne	do	do Bottum	3 00
	4.	Madison	do	do Sanders	3 00
	4.	Washington	do	do Blains	3 00
	4.	Chenango	do	do Byron	3 00
	4.	Washington	do	do Morris	3 00
	4.	Oswego	do	do White	3 00
March	11.	Tompkins	do	do Weidman	3 00
	11.	do	do	do do	1 00
April	25.	Onondaga	do	do Smith	5 00
June	24.	Oneida	do	do Thomas	5 00
February	4.	Amount of tax, Dr. Bottum			1 00
	4.	do	do	Dallas	1 00
	4.	do	do	Husted	1 00
	4.	do	do	Beadle	1 00
	4.	do	do	Van Anden	1 00
	4.	do	do	Hun	1 00
	4.	do	do	Crandall	1 00
	4.	do	do	Jenkins	1 00
	4.	do	do	Willard	1 00
	4.	do	do	S. R. Percy	1 00
	4.	do	do	Elsbug	1 00
	4.	do	do	Foster	1 00
	4.	do	do	Sayre	1 00
	4.	do	do	O. White	1 00
	4.	do	do	Orton	1 00
	4.	do	do	Blatchford	1 00
	4.	do	do	Cook	1 00
	4.	do	do	Bissell	1 00
	4.	do	do	Smith	1 00
	4.	do	do	Bradford	1 00
	4.	do	do	Carey	1 00
	4.	do	do	Swinburne	1 00
	4.	do	do	Bailey	1 00
	4.	do	do	Sanders	1 00
	4.	do	do	Squibb	1 00
	4.	do	do	Miner	1 00
	4.	do	do	Hutchison	1 00
	4.	do	do	C. F. Taylor	1 00
	4.	do	do	Israel Parsons	1 00
	4.	do	do	E. S. F. Arnold	1 00

February	4.	Amount of tax, Dr. S. G. Woolcott	$1 00
	4.	Diploma, Dr. Ayres	1 00
	4.	do per Daniel C. Hickey	10 00
June	25.	do Robert Nugent	10 00
May	9.	do Richard H. Goodell	10 00
February	1.	do Alexander Hamill	10 00
			$557 71

The expenditures for the past year will appear by the following statements, and the accompanying vouchers :

1864.

February	6.	Paid American Medical Times	$2 50
	6.	Fairfield Co. Bank, counterfeit	5 00
	6.	Paid Alexander Phillips, doorkeeper	6 00
	6.	Wm. Clark, page	3 00
	6.	J. C. Cuyler, reporter	15 00
	6.	Med. and Surgical Reporter, S. W. Butler	5 00
	6.	S. D. Willard, M. D., Secretary	150 00
March	2.	Joel Munsell, printing	7 20
	26.	Gavit & Cowell, diplomas	35 00
June	24.	Joel Munsell, printing	3 50
Sept.	23.	A. N. Bell, M. D., for prize essay	35 00
Nov.	1.	John E. Gavit, four diplomas	6 00
	15.	S. D. Willard, M. D., secretary	250 00
			$523 20
Balance on hand			34 51
			$557 71

JNO. V. P. QUACKENBUSH, *Treasurer.*

The report was referred to a committee consisting of Dr. Corliss, Dr. Townsend, and Dr. Smith.

The committee to whom was referred the treasurer's report, have examined the accounts and the accompanying vouchers, and found them correct.

HIRAM CORLISS,
HOWARD TOWNSEND,
WM. MANLIUS SMITH.

The treasurer has received from the medical societies of the following counties, and from institutions, during the session of 1865, as follows:

Society.	Paid by.	Paid.
Albany	Dr. Moore	$12
Allegany		
Broome	Dr. W. S. Griswold	5
Cattaraugus		
Cayuga	Dr. Samuel Gilmore	6
Chautauqua		

Society.	Paid by.	Paid.
Chemung	Dr. W. C. Way	5
Chenango	Dr. H. K. Bellows	6
Clinton		
Columbia	Dr. P. V. S. Pruyn	6
Cortland	Dr. Bradford	5
Delaware	Dr. Furguson	6
Dutchess		
Erie	Dr. C. C. Wycoff	12
Essex	Dr. W. H. Richardson	5
Franklin		
Fulton		
Genesee	Dr. I. Root	5
Greene	Dr. B. S. McCabe	5
Hamilton		
Herkimer	Dr. G. Sweet	6
Jefferson		
Kings	Dr. A. N. Bell	21
Lewis		
Livingston		
Madison	Dr. A. L. Saunders	6
Monroe	Dr. H. W. Dean	9
Montgomery	Dr. I. I. Bucklee	6
New York	Dr. S. T. Hubbard	51
Niagara		
Oneida	Dr. D. G. Thomas	12
Onondaga	Dr. W. Manlius Smith	9
Ontario	Dr. Swart	6
Orange	Dr. A. Cook	6
Orleans		
Oswego	Dr. Austin White	9
Otsego	Dr. I. S. Sprague	6
Putnam		
Queens	Dr. Ordroneaux	5
Rensselaer	Dr. Harvey W. Fowler	9
Richmond	Dr. W. C. Anderson	5
Rockland	Dr. Wm. Govan	5
St. Lawrence	Dr. D. Cook	9
Saratoga	Dr. M. H. Colby	6
Schenectady		
Schoharie	Dr. J. Pindar	5
Schuyler	Dr. S. B. H. Nichols	3
Seneca		
Steuben		
Suffolk	Drs. Carpenter and Thompson	6
Sullivan	Dr. Wm. S. Appley	5
Tioga		
Tompkins	Dr. I. S. Weidman	5
Ulster	Dr. I. V. Holt	9

Society.	Paid by.	Paid.
Warren	Dr. E. W. Howard	5
Washington		
Wayne	Dr. E W. Bottum	6
Westchester	Dr. E. S. F. Arnold	9
Wyoming		
Yates		
Albany Medical College	Dr. J. V. P. Quackenbush	5
Bellevue College Hospital	Dr. Taylor	5
Coll. of Physicians and Sur's,	Dr. E. S. Beadle	5
Geneva Medical College		
University of New York		
University of Buffalo	Dr. Eastman	5
New York Academy Med.,	Dr. White	5
Long Island Coll. Hospital,	Dr. Dudley	5

J. V. P. QUACKENBUSH.

Dr. Staats presented the following report, which was adopted:

MEDICAL SOCIETY OF THE STATE OF NEW YORK,
ALBANY, N. Y., *Feb.* 7, 1865.

The censors of the eastern district of this Society report that they have examined, since their report in February, 1864, ten students, of which number nine have been recommended for a State license.

BARENT P. STAATS, Chairman.

Dr. March presented the delegates from the Medical Societies of New Jersey and Pennsylvania.

Dr. Edward H. Parker, from the committee of the Merrit H. Cash prize essay, presented the following report:

To the Medical Society of the State of New York:

The committee appointed to award the prize founded by the late Dr. Merrit H. Cash, beg leave to report that only one essay has been received by them.

In this absence of competition, closing as it does the field for comparative criticism between rival essays, your committee have not felt that they would be authorized to confer the prize, unless in their opinion the essay presented should be so exhaustive of the subject, and so eminently worthy of distinction, as rightfully to deserve it. To this standard the essay before them does not rise, and the committee have, therefore, made no award of the prize.

In view, furthermore, of the great importance of the subject assigned, which has occupied so prominent a place in the sickness and mortality statistics of our armies, your committee take the liberty to recommend that the same subject be continued during the ensuing year, believing it to be one needing the most minute and careful investigation, while at the same time the field for observing its varied manifestations has been most extensively opened to the medical profession during the past three years.

All which is respectfully submitted.

THOMAS W. BLATCHFORD,
EDWARD H. PARKER,
JOHN ORDRONAUX,
} Committee.

ALBANY, *February*, 1865.

On motion of Dr. Staats the resolution appended to the report was adopted.

Dr. Kennedy, from the committee to equalize the assessment, presented the following report:

The committee appointed at the last annual meeeting of this Society, to whom was referred the matter of equalizing the contributions of the several county medical and other institutions in this State, represented by delegates in this Society, beg leave to report that they have given the subject due consideration, and would recommend the following resolutions for adoption:

Resolved, That the several medical county societies and other medical institutions in this State, represented in this Society, shall pay into the funds of this Society as follows:

Every society or institution represented by one delegate shall pay $5. Every society or institution entitled to more than one delegate shall pay $3 for every such delegate.

Resolved, That the treasurer of this Society be requested to assess the amount to be paid by each county medical society, and all other medical institutions represented in this Society, in accordance with the aforesaid resolution, and to send a copy of the same to every such society and institution.

JAMES KENNEDY,
THOS. C. BRINSMADE, } Committee.

Adopted.

Dr. Saunders amended that the assessment should be paid before the Transactions were delivered to the several county societies. Lost.

Dr. Staats moved that the adoption of the report be postponed. Lost.

Dr. Govan moved to amend the resolution by adding $5 for the first delegate, and $1 for every additional delegate. Lost.

The assessments, therefore, will be as follows:

	Quota.	Am't.
Albany County Medical Society	4	$12
Allegany County Medical Society	2	6
Broome County Medical Society	1	5
Cattaraugus County Medical Society	2	6
Cayuga County Medical Society	2	6
Chautauqua County Medical Society	2	6
Chemung County Medical Society	1	5
Chenango County Medical Society	2	6
Clinton County Medical Society	1	5
Columbia County Medical Society	2	6
Cortland County Medical Society	1	5
Delaware County Medical Society	2	6
Dutchess County Medical Society	2	6
Erie County Medical Society	4	12
Essex County Medical Society	1	5
Franklin County Medical Society	1	5
Fulton County Medical Society	1	5
Genesee County Medical Society	1	5

	Quota.	Am't.
Greene County Medical Society	1	$5
Hamilton County Medical Society	1	5
Herkimer County Medical Society	2	6
Jefferson County Medical Society	3	9
Kings County Medical Society	7	21
Lewis County Medical Society	1	5
Livingston County Medical Society	2	6
Madison County Medical Society	2	6
Monroe County Medical Society	3	9
Montgomery County Medical Society	1	5
New York County Medical Society	17	51
Niagara County Medical Society	2	6
Oneida County Medical Society	4	12
Onondaga County Medical Society	3	9
Ontario County Medical Society	2	6
Orange County Medical Society	2	6
Orleans County Medical Society	1	5
Oswego County Medical Society	3	9
Otsego County Medical Society	2	6
Putnam County Medical Society	1	5
Queens County Medical Society	2	6
Rensselaer County Medical Society	3	9
Richmond County Medical Society	1	5
Rockland County Medical Society	1	5
St. Lawrence County Medical Society	3	9
Saratoga County Medical Society	2	6
Schenectady County Medical Society	1	5
Schoharie County Medical Society	1	5
Schuyler County Medical Society	1	5
Seneca County Medical Society	1	5
Steuben County Medical Society	3	9
Suffolk County Medical Society	2	6
Sullivan County Medical Society	1	5
Tioga County Medical Society	1	5
Tompkins County Medical Society	1	5
Ulster County Medical Society	3	9
Warren County Medical Society	1	5
Washington County Medical Society	2	6
Wayne County Medical Society	2	6
Westchester County Medical Society	3	9
Wyoming County Medical Society	1	5
Yates County Medical Society	1	5
Albany Medical College	1	5
Bellevue College Hospital	1	5
College of Physicians and Surgeons	1	5
Geneva Medical College	1	5
University of New York	1	5

	Quota.	Am't.
University of Buffalo	1	5
Long Island College Hospital	1	5
New York Academy of Medicine	5	15

The following resolution was offered by Dr. E. H. Parker:

Resolved, That when the medical society of any county neglects or fails to hold a meeting for two years in succession, in the opinion of the State Medical Society that county society becomes extinct, and the profession residing within the limits of the county are authorized to proceed to the formation of a county society as if none had ever existed. Adopted.

The President appointed the following committee: Dr. W. Manlius Smith, Dr. Arnold, and Dr. Govan, to whom the matter was referred.

Dr. Lansing presented a resolution relative to the employment of a proof reader, which after debate was laid on the table.

Dr. Crandall, from the committee to invite medical men from the Legislature, announced that he had performed that duty.

Dr. Arnold read a report from the delegation to the Medical Society of New Jersey.

Dr. Robertson read a paper entitled "The importance of examining the dioptric media, in certain diseases of the eye."

The President announced the following nominating committee:

1st district,	W. C. Husted	New York.
2d	"	Wm. Govan	Orange.
3d	"	W. H. Bailey	Albany.
4th	"	W. H. Richardson	Essex.
5th	"	A. L. Saunders	Madison.
6th	"	C. M. Crandall	Allegany.
7th	"	Edward Hall	Cayuga.
8th	"	H. W. Dean	Monroe.

On motion of Dr. Staats, the Society adjourned to meet at 3 o'clock P. M.

AFTERNOON SESSION.

The minutes of the morning session were read and approved.

Dr. White, from a committee to facilitate the business of the Society, submitted the following report:

REPORT OF COMMITTEE APPOINTED UNDER THE RESOLUTION OFFERED BY DOCTOR VANDERPOEL DURING THE SESSION OF 1864.

The committee appointed at the last meeting of the society, under the resolution offered by Dr Vanderpoel directing them "to submit some plan to facilitate business at our annual meetings," and report at the next meeting of the society, beg leave to offer the following report.

The mover of the resolution—thinking it might be deemed advisable to divide the society into sections—desired the matter should be referred to a committee of gentlemen from the city of New York; inasmuch as they might be supposed from their connection with the Academy of Medicine of that city, to be familiar with the manner of dividing a medical body into sections; the number and organization of the latter; the facilities they afford for the transaction of a greater amount of business, and their good or bad effects on the prosperity of the society so divided.

Beside the proposition entertained by Dr. Vanderpoel, two others have suggested themselves to your committee as most likely to effect the object the mover of the resolution had in view; and the three following plans for relieving the society from its pressure of business, have been fully considered by them, viz: 1st. The division of the society into sections. 2d. The institution of a business committee to recommend which papers should be read at length and discussed; and which by title or abstract, and referred to the committee of publication; and 3d. An extension of the session of the society beyond three days, its present limit.

Whilst your committee admit, as fellows of the Academy of Medicine, that the latter institution occasionally has been relieved by the sections from the consideration of subjects that could not receive that attention in general meeting their importance seemed to require, without prejudice to more important and interesting matters; and that these subjects have in some instances, been thoroughly considered by the sections, and reported upon to the Academy; they are nevertheless of the opinion that this advantage has been more than counterbalanced by an effect the division of the Academy into sections has had, to lessen the number of fellows in attendance at its general meetings; thereby diminishing the interest of its discussions and other proceedings.

In support of this conclusion, they have learned from an officer of the Academy who has its prosperity much at heart, that "whilst some fellows are very much interested in the section to which they belong, and attend its meetings regularly; they appear to have lost all interest in the general meetings of the Academy, seldom being present." Your committee apprehend in case this society was divided into sections, that some of our members would soon come to be equally indifferent to everything outside of their particular section.

If this society were divided into sections, and one or more of them were in session at the same time with the society; the proceedings of the latter as a whole could not be known to all the members and delegates in attendance, until the publication of its Transactions some six months afterwards; a result most likely to be unsatisfactory to many persons.

If two or more sections were in session at the same time, some members might be more interested in a paper to be read or discussed in a section not their own, by reason of the nature of the subject or the reputation of its author, than in the proceedings of their own section; and there would be much running away from the one to which they had been assigned, in order to be present at another. In the Academy of Medicine this supposed state of things could not be, as the different sections meet on different evenings at different places, and never on the evening of a regular meeting of the Academy.

If the sections met in the evening, it would render the society's meeting during the day uninteresting, as it would consist mostly, in the reception of papers by their titles and referring them to their appropriate sections. Your committee also think, that to have the society in session during the day and the sections during the evening, would be found to be too fatiguing, and render our evenings far less agreeable than the hospitable people of Albany have heretofore made them.

As most of the members and delegates attending the meetings of the society are from the country, a majority of us must necessarily be general practitioners, interested alike in surgery, obstetrics and practical medicine. From their practical experience in each of these departments, these general practitioners are competent to entertain an authoritative opinion on most questions arising in either of them; and they would be reluctant to loose an opportunity to hear and participate in the discussion of all matters directly or remotely appertaining to any branch of our profession. To all such general practitioners the division of this society into sections, would in the opinion of your committee prove to be very unsatisfactory and very unprofitable. Whilst to him who practices exclusively either medicine, surgery or obstetrics, it would serve to enlist all his interest in his own section, and soon render him indifferent to the proceedings of the others; as well as to the general meetings of the society.

In their examination of different plans, and in their efforts to devise one for the relief of the society in the transaction of its yearly increasing amount of business (as directed by the resolution under which the committee was appointed,) it has been forced upon their convictions that the time of the society might be economized, and additional interest and profit imparted to its proceedings; by the institution of a business committee, to which every paper, except reports of officers and committees, and official communications from Medical Societies or Institutions; and papers contemplating action on the part of this society, should be handed by the author or person having it in charge. That this business committee should cursorily examine such papers and recommend to the society which of them should be read by title or abstract and referred to the committee of publication, and which are of such immediate interest or sufficiently practical in their character as to make it desirable that they be read at length and discussed. This plan would do away with that practice in our proceedings which has grown into an established precedent, of allowing members and delegates to enter their names and the titles of papers they propose to read, and the amount of time they expect to consume on the bulletin card, and thus appropriate to themselves as much of the session as they please. It would also save much valuable time now consumed in the reading of papers not calculated to elicit discussion, but which oftentimes are papers of much importance and very proper and desirable matter for publication in our volume of Transactions; and which we, who are actively engaged in practice, could read at home in our leisure moments with more satisfaction and profit, than we can listen to the reading of them here, when we are anxious to be with our patients. It would furthermore enable the society to more thoroughly discuss those papers of a practical character which are read here. Some of which have heretofore, for the want of time, been given the go by; and thus much profitable interchange of opinions and experiences lost to the members and delegates.

In regard to the proposition to seek relief in an extension of the session; your committee would counsel their associates in the society to remember; that as a profession we cannot afford any more time in our attendance upon these annual meetings, than is indispensably necessary for the proper transaction of business. It would therefore seem judicious that the session

be extended only from time to time as the exigencies of the society require, or pari passu with the increase of its business.

From the knowledge your committee have of the unsatisfactory workings of the Academy of Medicine, as divided into sections; and from their convictions that the objections to such division of that institution would be found to be materially augmented when applied to a society like this; composed mostly of general practitioners, and with only an annual session of three consecutive days; they recommend to the society the adoption of the following resolution.

Resolved, That it is inexpedient to divide this Society into sections.

As the object of the society in referring this matter to them was to ascertain how relief from the pressure of business might be obtained; and as your committee believe it can only be, by adopting the suggestions of the report in regard to the appointment of a business committee; and by extending the session beyond three days—its present limit—they respectfully submit for the society's consideration the additional resolutions:

Resolved, That hereafter a business committee shall be appointed by the president, at an early hour of the first day of the society's meeting; to which all reports of cases, all dissertations, treatises, essays, theses, monographs, and all biographical notices, or memoirs shall be handed by the authors or persons having them in charge.

Resolved, That this business committee shall cursorily examine all such papers, and recommend to the society which of them should be read by title or abstract, and referred to the committee of publication, and which are of such immediate interest or sufficiently practical in their character as to make it desirable that they be read in extenso and discussed.

Resolved, That this committee consist of three members or delegates, and that they enter their recommendations of papers to be read, on the bulletin card usually kept for the information of persons attending the meetings of the society, and that no other entries be made thereon.

Resolved, That all papers recommended to be read before the society, shall be read in the order in which they are placed on the bulletin card by the business committee, unless otherwise ordered by vote of the society.

Resolved, That the session of the society be extended to —— days.

Signed O. WHITE,
J. KING MERRITT,
N. C. HUSTED.

Dr. Durrey moved that the resolution appended to the report, be amended so as to make the president appoint the committee one year previous. Lost.

The resolutions were taken separately and adopted, with the exception of the last, which was laid on the table.

Dr. B. F. Hough read a paper on the "Census of 1865, in relation to its Medical bearings."

Dr. Lee read a paper entitled "The Uses and Abuses of Muscular Atrophy, with the true indications for its employment," by Dr. C. F. Taylor, of New York.

Dr. Isaac E. Taylor read a paper entitled "Facts in relation to Placenta Previa," &c.

Dr. Squibb presented a paper entitled, Epithelial Cancer of the face, by Dr. J. C. Hutchins, of Brooklyn.

Dr. Willard presented the following communication from His Excellency Governor Fenton:

STATE OF NEW YORK, EXECUTIVE DEPARTMENT,
ALBANY, *February* 7, 1865.

General:

The Governor has received your letter of this date, and directs me to say that he will be happy to meet the members of the Medical Society of the State of New York, at the Executive Mansion, to-morrow evening at 9 o'clock, and you will do him the favor to invite them accordingly.

Very respectfully,

M. J. FARRELL, *Col. & A. D. C.*

General WILLARD.

Dr. George Burr read a paper entitled Cerebro Spinal Meningitis, by Charles Burr.

The Secretary presented papers entitled as follows:

"Phlegmoid Erysipelas," by Dr. C. C. F. Gay, M. D., of Buffalo.

"Extracts from letters received from Henry S. West, M. D., Physician to the American Board of Foreign Missions, at Sivai, Syria," communicated by Dr. J. G. Orton, from committee on correspondence for sixth district.

"Biographical Memoir of Dr. Pelatiah Brooks, M. D., by Dr. J. G. Orton.

"Abstract of the re-organization of the Cayuga County Medical society."

"Early history of Chautauqua County Physicians," by Elial T. Foote, M. D., formerly of Chautauqua, now of New Haven.

"Memoir of James Stewart, M. D.," by Charles A. Lee, M. D.

The secretary in behalf of Dr. Elisha Harris presented the following:

Whereas, The prevalence of infectious diseases in the city of New York is a source of danger to the health of cities and towns throughout the State, and

Whereas, Our professional brethren in New York have put forth renewed and earnest efforts to promote proper investigations of sanitary questions, and to procure the establishment of a suitable system of sanitary government,

Resolved, That the New York State Medical Society hereby expresses its cordial interest in the efforts that are being made by leading physicians and citizens of New York, to procure the enactment of an adequate system of sanitary government for that city.

Resolved, That it is the earnest wish and recommendation of this society that the bill now pending before the Legislature, entitled, "An act to establish a Metropolitan Sanitary District and Board of Health, to preserve the public health in said district, and to prevent the *spread of disease therefrom*," be speedily enacted into a law.

Resolved, That a copy of these resolutions be presented to the presiding officers of the Senate and Assembly respectively, with the request that the same may be laid before those honorable bodies.

The resolutions were laid upon the table until to-morrow.

By Dr. E. H. Parker, that the letters from gentlemen elected honorary members of the society, in acknowledgment of the same, be placed upon the minutes. Adopted.

By Dr. Husted, to adjourn till 10 o'clock on Wednesday, A. M.

WEDNESDAY MORNING.

The society was called to order by the president, Dr. Hyde.

Prayer was offered by the Rev. Dr. Clark.

The minutes of the preceding session were read and approved.

The committee on credentials presented Dr. J. G. Beckwith, of Connecticut.

Dr. Beckwith responded to the presentation.

The committee presented Dr. Halsey from the Pennsylvania State Medical society.

Dr. Halsey responded to the presentation.

Dr. Conant presented a specimen of Ossified Fœtus, and remarked upon the same.

Also specimens of hair and numerous well developed teeth from an ovarian tumor.

Dr. Burr presented the following, which was adopted :

Resolved, That this society have heard the announcement of the death of Dr. Jonathan Knight, of Connecticut, with profound sorrow. That in his decease the entire profession have to mourn the loss of a distinguished and eminent man, and that we tender to our professional brethren of Connecticut an expression of our high admiration of the character of Dr. Knight, and of our sincere grief at his loss.

Dr. H. N. Eastman read a paper entitled, "The Modus Operandi of Quinine."

The Vice President, Dr. G. J. Fisher, read the introduction to a paper entitled, "Double, or Compound Monsters."

The report of Dr. C. A. Lee, chairman of the committee on medical education, was read and accepted.

PEEKSKILL, *January* 20, 1865.

To the Medical Society of the State of New York:

At the last meeting of this Society I presented in behalf of the Medical College of Buffalo, from which I was a delegate, the following resolution :

"UNIVERSITY OF BUFFALO,
MEDICAL DEPARTMENT.

On motion of Prof. Charles A. Lee, seconded by Prof. James P. White, it was

Resolved, That the New York State Medical Society be requested to appoint a committee to consider the expediency of, and report a plan for the appointment of a State Board of Examiners, for the degree of Doctor in Medicine, and to report at the next meeting of the Society.

Resolved, That the same committee be instructed to bring the subject before the next meeting of the American Medical Association, and that the delegates of this Society be instructed to urge the general adoption of the same plan in other States of the Union. Carried unanimously.

THOMAS F. ROCHESTER,
SANDFORD EASTMAN,
Dean of the Faculty.

BUFFALO, *February* 2, 1864."

Dr. B. P. Staats moved that the resolutions be adopted by the society, and that the same committee be instructed to bring the subject before the next meeting of the American Medical Association, and that the delegates of this society be instructed to urge the general adoption of the same plan in the other States of the Union. The resolutions were adopted.

In accordance with these resolutions your committee has endeavored to perform the duty assigned it, to the best of its ability. The subject is by no means a novel one, it having been agitated in this State for more than thirty years; been discussed in our county medical societies as well the state society; been brought before the "American Medical Association" at different times, both in reports of committees and in the opening addresses of the presidents; until it was believed that the time had come, at last, in our own State, when the measure could be carried into operation all acknowledged the necessity of some plan to raise the standard of attainment and qualification in the mass of our profession; for although decidedly elevated above what it was 30 or 40 years ago, it was conceded by all that it still fell far short of what it should be.

It will be recollected that at the annual meeting of this society in 1861, Prof. Howard Townsend, M. D., a member of the present committee, acting as chairman of the committee on "medical education," made an elaborate report on this whole subject, which was published in our "Transactions" of that year. The members of the society are referred to that report, for the arguments and statements, which have led to the revival of the subject at this time. This report was referred to the "American Medical Association," but was never taken up or acted on, it is believed, by that body. Copies of it were also directed to be sent to the different Medical State Societies, where, so far as known, it has met the same fate. In endeavoring to carry out the objects for which your committee was appointed, consultations have been held with leading members of the profession in this, and other States, and especially with the Faculties of the different Medical Colleges in our own State; to each of which a circular was sent, containing the resolutions of the faculty of the Buffalo University, and soliciting the official action of said faculties on the same.

To this appeal, some, but not all the colleges have responded; approving the plan in theory, but doubting its practicability. They all admit, that if such a measure were carried out with something like legal force, it would be of great importance to our profession and to the community generally. They admit, moreover, that such a Board of Examiners, themselves properly qualified, would reject a large number of applicants annually, who are now passed by the schools; and that this very fact would at once elevate the standard of qualification. As soon, however, as we attempt to arrange the details of a plan for constituting such a Board of Examiners, the difficulties commence. The first and most important question is: Who is to appoint the Board? Shall it be the Governor and Senate? In that case, we can readily determine the character of the examiners: they will be mere politicians, and of course, wholly unfitted for the duties assigned them. Shall the appointing power be lodged in the Board of Regents? This would be an improvement on the first plan; but still, we would have to run the usual risk, that personal friends, relations, and those having influential and power-

ful connections would be selected, as was often formerly done in filling vacancies in the faculties of our medical colleges, by the same board, in the place of men far better qualified and more deserving. Shall we succeed better if we give the appointing power to the State Medical Society? On this point, there is some difference of opinion; a majority taking the negative. While your committee do not feel called upon to express any opinion on this question, as they have no data from which to draw any positive conclusions, they may be allowed to enquire whether the nearest approximation to a scheme of appointment that would secure a qualified board would not be to give the power to the Medical Schools themselves; acting either alone, or in connection with the Regents of the University or the State Medical Society. This plan appears to your committee a practicable one, and not difficult to put into execution, provided the colleges could agree to carry it into effect. But here is the insurmountable obstacle. *The schools cannot afford to lose their graduation fees.* On these they depend for sustaining their incidental expenses, which are much greater than is generally supposed; indeed, if this fund were taken from our medical colleges, many of them would be compelled to close their doors. Owing to the heavy expenditures necessary to sustain them, public teaching has never been a lucrative employment in our State, except perhaps during those few years when the State made the colleges an annual appropriation; and even then it is questionable whether the professors would not have realized far greater pecuniary rewards, had they devoted themselves entirely to practice. The professorships of practice of medicine, surgery and midwifery in our larger cities, are doubtless exceptions to this remark; inasmuch as the incidental advantages connected with their chairs, furnish a liberal remuneration over and above the fees for their tickets.

To gain, therefore, the consent of the schools to the appointment of a State Board of Examiners, it would be necessary that the schools should be reimbursed, annually, an amount equal to what the graduation fee would amount to at the usual rate. There is no source from which such reimbursement could be expected, unless from the State, which would require an act of the Legislature, and such an act, at present at least, could not, probably, be obtained. Indeed, it can hardly be expected for many years to come, that any dependence, whatever, can be placed on Legislative or State aid to our medical schools; especially, since it has come to be doubted whether it should be granted even to common schools.

So far then as your committee can see, the plan of a State Board, at present, is impracticable, though at some future period, the present obstacles may be removed.

We regard to the objection urged by some, that a State Board would necessarily drive medical students to other States, where a diploma could be obtained on easier terms; such would undoubtedly be its effect to some extent; unless a law were passed, requiring all physicians, who come into this State to practice medicine, to come before this State Board for examination for a license as is now required in Canada, Cuba, &c.

There is still another objection in the minds of many, and that is, the assumed illegality of depriving our incorporated institutions of the vested right of conferring the degree of Doctor in Medicine. To this it is a suffi-

cient reply, that it is not proposed to deprive them of such power, or right, but to change the mode of ascertaining the qualifications of those on whom such distinction should be conferred, and each college might, and probably would be, represented in the Board were such to be appointed.

Your committee, in conclusion, do not suppose any good will result from the further agitation and discussion of the question at the present time, and therefore beg to be discharged from any further consideration of the subject.

CHARLES A. LEE, M. D., Chairman of Com.
HOWARD TOWNSEND, M. D.

The report was accepted.

On motion of Dr. Staats, the committee on Medical Education, at their request, was discharged.

Dr. Brinsmade read the report of the committee in relation to the propriety of medical practitioners advertising their specialty in medical or other journals, viz:

Resolved, That in the opinion of this society it is impossible to define the limits of advertising "medical specialties" either in medical or other journals.

Resolved, That advertisements indicating location and residence are the utmost limits of self announcement consistent with professional dignity, and that all reference to special branches of medical practice as extra inducements to patronage should be deemed a violation of the code of Medical Ethics.

Resolved, That hereafter any medical practitioner so offending shall be disqualified as a delegate to, or for membership of this society, and if already a delegate to or a member thereof, shall be deemed a fit subject for discipline.

Resolved, That this society recommends all medical societies in the State of New York to adopt the foregoing resolutions, with a view to establish the true dignity of our profession.

Resolved, That the foregoing resolutions be transmitted to the American Medical Association, at its next meeting, as an expression of the opinion of the Medical Society of the State of New York, and that for this purpose a committe of presentation be appointed.

THOS. C. BRINSMADE,
HOWARD TOWNSEND,
GUIDO FURMAN,
Committee.

The report was adopted.

The resolutions having been made, the special order for twelve o'clock on the second day of the session were called up, and on motion of Dr. Staats, seconded by Dr. Squibb, were adopted.

The resolutions by Dr. Harris, relative to the enactment of a sanitary law for the city of New York, laid on the table until to-day, were called up by Dr. Kennedy for discussion. On being seconded by Dr. Corliss, they were unanimously adopted.

On motion of Dr. Staats the Secretary was directed to prepare copies of the resolution of Dr. Harris, and present to the Speaker of the Assembly and the President of the Senate.

Dr. Squibb read a brief notice of Dr. Franklin Bache, an honorary member of the Society.

The Secretary presented a paper entitled "Pathology of Pneumonia," by Dr. S. Oakley Vanderpoel; also, "Life and Character of Dr. Thomas Goodsell, late member of the Society," by D. G. Thomas, M. D., of Utica; also, "Biographical Sketch of Dr. Mason F. Cogswell, deceased."

Dr. Willard, in behalf of Dr. J. G. Orton, presented the following, which were adopted:

Resolved, That a standing committee on statistics be annually appointed by this Society, whose duties shall be to solicit, collect, and preserve documents relating to the medical profession, and the practice of medicine and surgery in the State of New York.

Resolved, That the said committee prepare a circular, which shall be submitted to and issued by the committee of publication of this Society, inviting correspondence and the transmission of facts and observations in the various departments of professional inquiry.

Resolved, That the committee consist of eight members, and shall be selected one from each senatorial district.

The Secretary presented a paper entitled "Small-pox," by Dr. Cyrus Ramsey.

The Society then adjourned to meet at 3 o'clock P. M.

AFTERNOON SESSION—Wednesday.

The minutes of the morning session were read and approved.

Dr. Smith, from the committee on Dr. Parker's resolution, presented the following report:

The committee to which was referred the resolution offered by Dr. Parker, with regard to those county medical societies that have neglected to keep up their meetings, report that, having examined the subject under the best light attainable, they are of the opinion that this Society has not the power to declare any county society extinct, and therefore recommend that the resolution be not adopted.

It appears by the statements of Dr. Parker, a member of the Dutchess County Society, and of Dr. Mellen K. Holbrook, a resident of the county but not a member of the county medical organization, that efforts have been made by themselves and others to have that society resume its regular meetings, without success. And, as your committee have reason to believe, there are other county societies in a like state of suspended animation.

By reference to the by-laws of the State Medical Society, § 17 (page 19 of the pamphlet edition), it will be seen that it is provided that "if any county medical society shall neglect to perform all such acts as may be required to be done by it, by the law incorporating medical societies," &c., "it shall be admonished touching any such proceedings," &c. One of the duties, required by law, of county medical societies, is to elect delegates to the State Society, and as the societies above alluded to fail to perform this duty, your committee recommend that, in accordance with your by-laws, an admonition be prepared by the proper authorities of this Society, and duly administered to the officers of such derelict societies, in hopes it

may prove an effective stimulant in reawakening the torpid vitality of the organizations under their control.

In order to carry out this recommendation, if adopted, your committee would advise that the Secretary be requested, by correspondence with medical gentlemen in counties not represented by delegations in this Society, or in any other practicable method, to ascertain the names of the officers of inert medical societies last elected, and that hold their positions by virtue of section two of the act of April 10, 1813, chapter 94, session 36 (see Society's pamphlet edition, page 9), and to communicate them to the admonishing authorities, in order that the intended stimulant may be applied to the appropriate patients.

Your committee would also recommend that this Society inform the members of county societies, whose officers neglect to call meetings, that under the provisions of the act above quoted, they have the right to meet without any such call, on the legally appointed day for the annual meeting of their societies, at the legally appointed place, and to proceed to infuse fresh life into their languishing societies by the election of new officers who will attend to their duties—and urge upon such members to avail themselves of this right.

If this recommendation should be adopted by you, your committee would advise that the Secretary of this Society prepare a circular, setting forth the action of this Society in the matter, and cause it to be distributed at an early day among the medical gentlemen of the counties not represented by delegates in this Society.

If there are any counties in this State in which county organizations have never been formed, or have ceased to exist by the death of all their officers, it is recommended by your committee that a circular be prepared and distributed among members of the medical profession in such counties, giving information as to the method of organizing county medical societies, and urging upon them the duties and privileges of such organization.

All of which is respectfully submitted.

WM. MANLIUS SMITH,
WILLIAM GOVAN,
E. S. F. ARNOLD,
} Committee.

On motion of Dr. Parker, the report was accepted and adopted.

The Secretary called the list of the county associations. Gentlemen severally responded regarding their prosperity, the regularity of their meetings, &c.

Papers were presented by Dr. E. H. Parker, entitled as follows: "A case of tumor of the pharynx, with illustrations," "A case of fracture of the thigh, with dislocation at the hip joint," and "Some experiences with ether," by Edward H. Parker.

Dr. Henry D. Noyes made a demonstration of the opthalmoscope—its uses in diagnosticating the diseases of the eye, and presented diagrams and several opthalmoscopes, illustrative of his subject.

Dr. Wm. Manlius Smith read a paper entitled "Unofficinal iodides."

Dr. Armsby gave a verbal account of a case—ligature of subclavian artery.

Dr. Garrish remarked upon the treatment of puerperal fever.

Dr. H. S. Downs read a paper entitled "Mutually antidotal properties of opium and belladonna," illustrated by cases.

Dr. Downs presented a paper entitled "Upon some of the toxic effects of opium," by Dr. Calkins.

The Secretary presented a paper entitled "New mode of remedial inhalation," by Louis Ellsberg.

The following report was received from the delegates of the Pennsylvania Medical society :

To the President of the Medical Society of the State of New York :

The undersigned delegates from the Medical Society of the State of Pennsylvania, beg leave to express the high gratification they have enjoyed in attending the present annual session of your honored association. We have listened with pleasure to the interesting and instructive papers read before the society. "Words fitly spoken are like apples of gold in pictures of silver," and we are sure that your words in favor of medical organization for the advancement of the interests of medicine, and the elevation of the medical profession to a higher stand-point, are emphatically "*words fitly spoken.*"

We confidently cherish the hope that the correspondence by delegates between the Societies of the sister states of New York and Pennsylvania, may long be continued, and let us assure you we shall be very happy to meet a full delegation of your Society at Altoona on the second Wednesday of June next.

CALVIN C. HALSEY,
EDWD. WALLACE,
GEO. F. HORTON.

ALBANY, N. Y., *February* 8, 1865.

Dr. Steward presented the following, which was adopted :

Resolved, That practicing physicians who habitually fail for four consecutive years to join or neglect to attend the meetings of the County Medical Society, in which such persons may reside, or some other regular and legal medical organization in said county, are not eligible to a seat in this body either by invitation or otherwise.

At the suggestion of Dr. Bates, Dr. Wilson of the Cattaraugus Indians, was invited to address the society.

After remarks by Dr. Wilson, the society adjourned to meet at 8 o'clock.

EVENING SESSION.

The society met at 8 o'clock, the Vice President, Dr. George J. Fisher, presiding.

Dr. Frederick Hyde, of Cortland, the President, delivered the annual address.

After which Dr. Brinsmade presented the following, which was unanimously adopted :

Resolved, That the thanks of this society be presented to the President, for his very able, earnest, and timely address.

On motion the society adjourned to meet at nine o'clock on Thursday morning.

Third Day—THURSDAY, *February 8.*

The Society met at 9 A. M. The minutes were read and approved.

Dr. Knowles, a delegate from Vermont, remarked, congratulating the Society upon its prosperity, and his appreciation of being a delegate to it.

Dr. Miller, from Massachusetts, paid a glowing tribute to the Society and its members.

Dr. Kennedy presented the following, which was adopted :

Resolved, That the delegates and distinguished strangers from other States, to this Society, shall be entertained by and at the expense of this Society, while attending the meetings thereof.

Dr. Garrish presented the following, which was adopted :

Resolved, That Dr. Wilson be requested to furnish a statistical account of the tribe of Indians which he has under his especial care ; the prevailing diseases, duration of life, if puerperal fever prevails among them, the number of complicated or instrumental cases, and number of still-born children, &c.

Dr. E. Lee Jones presented a paper entitled, "Statistics of the Hospital Department of the New York State Soldiers' Depot."

Dr. S. D. Willard read from a report on the condition of the insane poor, made by him under the authority of the Legislature.

Report of committee on nominations was presented, and the following officers were duly elected :

For President—HENRY W. DEAN, of Rochester.

For Vice President—JOSEPH C. HUTCHISON, of Brooklyn.

For Secretary—SYLVESTER D. WILLARD, of Albany.

For Treasurer—J. V. P. QUACKENBUSH, of Albany.

CENSORS.

Southern District	Oliver White, DeWitt C. Eames, Samuel A. Purdy.
Eastern District	B. P. Statts, S. C. Brinsmade, P. McNaughton.
Middle District	M. M. Bagg, C. B. Coventry, A. F. Doolittle.
Western District	Alex. Thompson, C. M. Crandall, Edward Hall.

COMMITTEE OF CORRESPONDENCE.

First District	Guido Furman.
Second District	John P. Garrish.
Third District	H. A. Carrington.
Fourth District	James Ferguson.
Fifth District	J. M. Sturdevant.
Sixth District	John G. Orton.
Seventh District	A. B. Shipman.
Eighth District	James P. White.

AS PERMANENT MEMBERS.

First District..... Oliver White, New York.
James M. Minor, Brooklyn.
Second District.....John W. Green,
E. S. F. Arnold, Westchester.
Third District .....Peter P. Staats, Albany.
John Ferguson, Delaware.
Fourth District.....Griffin Sweet, Herkimer.
Asa D. Hammond, Essex.
Fifth District.....John P. Gray, Oneida.
Jacob Hunt, Oneida.
Sixth District..... ..M. M. Wood, Chenango.
U. G. Bigelow, Albany.
Seventh District.....E. W. Bottum, Wayne.
Isaac E. Taylor, New York.
Eighth District.....J. T. Williams, Chautauque.
Sanford Eastman, Erie.

ELIGIBLE TO PERMANENT MEMBERSHIP.

First District.....D. S. Conant, New York.
A. N. Bell, New York.
Jerome Smith, New York.
J. R. Van Kleek, New York.
Second District.....Avery Cook, Orange.
Third District .....Wm. F. Curtiss, ———
Levi Moore, Albany.
John Pindar, Schoharie.
C. C. Carel, Delaware.
Fourth District .....Lyman Barton, Essex.
Wm. H. Richardson, Essex.
Fifth District.....H. S. Crandall, Madison.
James Whiteford, Madison.
Sixth District .....W. S. Griswold, Broome.
H. K. Bellows, Chenango.
Seventh District.....W. L. Stèwart, Ontario.
Samuel Gillmore, Cayuga.
Israel Parsons, Onondaga.
H. N. Eastman, Ontario.
Joseph H. Richardson, Cayuga.
Eighth District.....S. Barrett, Genesee.

FOR HONORARY MEMBERS.

Wilson Jewell,.....Philadelphia.
Josiah G Beckwith, ...Litchfield, Conn.
Lyndon A. Smith,..... .....Newark, N. J.
Charles S. Tripler,.....U. S. A.
Charles A. Pope, ...St. Louis, Mo.
R. B. Palmer, ...Ann Arbor, Mich.

ELIGIBLE AS HONORARY MEMBERS.

C. E. Brown-Séquard,.....Paris.
Wm. Warren Green,.....Pittsfield, Mass.
Middleton Goldsmith.....Louisville, Conn.
H. J. Stevens,.....St. Albans, Vt.
Samuel W. Thayer, Jr.,.....Burlington, Vt.

RECOMMENDED TO THE REGENTS OF THE UNIVERSITY FOR THE DEGREE OF DOCTOR OF MEDICINE.

Ferris Jacobs.....Delhi, Delaware County, N. Y.
Richard S. Satterlee.....U. S. A.

DELEGATES TO THE NATIONAL QUARANTINE AND SANITARY CONVENTION.

Dr. Abraham Crispell,
Elisha Harris,
John H. Griscom,
John Swinburn,
John W. Green,
Dr. Alden March,
Thos. W. Blatchford,
Isaac E. Taylor,
Augustus Willard.

DELEGATES TO CONNECTICUT STATE MEDICAL SOCIETY.

Dr. Isaac E. Taylor,
John G. Adams,
Dr. James H. Curry,
Hiram Corliss.

DELEGATES TO NEW JERSEY STATE MEDICAL SOCIETY.

Dr. Nathaniel C. Husted,
John H. Griscom,
John Swinburn,
Dr. B. P. Staats,
G. J. Fisher.

DELEGATES TO MASSACHUSETTS STATE MEDICAL SOCIETY.

Dr. A. L. Saunders,
Hiram Corliss,
Dr. P. Stewart,
D. S. Conant.

DELEGATES TO NEW HAMPSHIRE STATE MEDICAL SOCIETY.

Dr. Henry Gray,
James Ferguson,
Dr. Edward Hall.

DELEGATES TO VERMONT STATE MEDICAL SOCIETY.

Dr. Hiram Corliss,
Wm. H. Richardson,
Dr. William Govan,
Thomas C. Brinsmade.

DELEGATES TO PENNSYLVANIA STATE MEDICAL SOCIETY.

Dr. E. S. F. Arnold,
E. H. Parker,
Dr. H. S. Downes,
John P. Garrish.

DELEGATES TO OHIO STATE MEDICAL SOCIETY.

Dr. J. T. Williams,
James P. White,
Dr. Sanford Eastman,
W. H. Bailey.

DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION.

Dr. W. Rockwell,
C. M. Crandell,
Frederick Hyde,
George Brown,
A. L. Saunders,
Dr. Wm. Govan,
T. C. Brinsmade,
N. C. Husted,
J. C. Hutchison,
C. Mitchel,

Dr. James R. Wood,
Wm. H. Bailey,
D. P. Bissell,
S. D. Willard,
W. H. Richardson,
Isaac E. Taylor,
John Swinburn,
P. Stewart,
Dr. Edward Hall,
J. T. Williams,
Sanford Eastman,
H. W. Dean.
Howard Townsend,
James M. Minor,
J. G. Orton.

COMMITTEE ON STATISTICS.

First District	Dr. N. C. Husted.
Second District	J. G. Fisher.
Third District	T. C. Brinsmade.
Fourth District	J. B. Reynolds.
Fifth District	A. L. Saunders.
Sixth District	J. G. Orton, Chairman.
Seventh District	N. Nivison.
Eighth District	J. R. Cotes.

Dr Brinsmade presented a paper entitled "A case of violent carbuncular inflammation of the lip, with the literature of the disease."

The Secretary read the following from Dr. Thomas C. Brinsmade, of Troy:

"I will give $100 for the best essay on medical and vital statistics. The essay must be accompanied by a plan for making and tabulating hospital reports, records of private practice in medicine, surgery, and obstetrics, together with a draft of a law for the registration of births, marriages, and deaths. The prize to be awarded by the committee of the New York State Medical Society on prize essays; the essay to be placed in the hands of the committee, with the plans and drafts, on or before the 15th of December next.

THOMAS C. BRINSMADE.

Dr. Arnold presented the following, which was adopted:

Resolved, That at future meetings of this Society the President shall appoint a committee of reception, of three, to receive, present, and take charge of corresponding delegates from other States during the sessions of this Society.

Dr. Staats moved to reconsider the vote offered by Dr. Kennedy, viz.:

Resolved, That delegates and distinguished strangers from other societies to this Society shall be entertained by and at the expense of this Society while attending the Society.

The motion was reconsidered.

Dr. Wyckoff presented the following, which was adopted:

Resolved, That a committee of one or more be appointed to inquire into the status of the law in regard to the reception of members into the county societies, and of the duty of the presidents in regard to notifying irregular practitioners to join the same.

The Secretary moved that the committee of publication be allowed to receive any communication after the adjournment, the authors of which

may have failed to reach the meetings in consequence of the bad condition of traveling, or otherwise. Adopted.

On motion a vote of thanks was extended to the retiring officers of the Society for the impartiality and ability with which they had discharged their duties—to the supervisors of Albany county for the use of their chamber, and to His Excellency Gov. Fenton for his hospitable entertainment.

After which the Society adjourned.

SYLVESTER D. WILLARD,
Secretary.

Letters From Honorary Members.

ARTICLE XXXI.

PHILADELPHIA, *March* 7, 1865.

To S. D. WILLARD, M. D., *Secretary N. Y. State Medical Society:*

Dear Sir—Through your kind promptness I have received my certificate of honorary membership in the Medical Society of your State.

You will please convey to the members of the Society my acknowledgments for the honor conferred, and to assure them that while I appreciate their kindness I shall ever strive to merit their confidence by continuing, as in the past, to cherish and exalt the science of medicine, by strengthening its ethics, and encouraging a sound and liberal system of education.

Hoping I may find it convenient to be present at your next session, I remain

Truly your friend,

WILSON JEWELL,
420 N. 6th St.

UNIVERSITY OF MICHIGAN, ANN ARBOR, *Feb.* 27, 1865.

S. D. WILLARD, M. D., *Secretary Medical Society of the State of New York:*

Dear Sir—Your note of the 29th inst., informing me of my election as an "honorary member of the Medical Society of the State of New York," accompanied with the certificate of membership, was duly received.

To say that I am highly gratified by this expression of the venerable and dignified Medical Society of the Empire State—the State also of my birth—and that I appreciate the high honor conferred, seems feebly to express what I feel. An intensity has been given to my gratification by the surprise, as I was unaware that my name had been proposed, and particularly by not being able to account for the fact, without supposing that I had some very partial friends in the Society, or that my devotion to the profession had attracted the attention of the members, and in their judgment justified some recognition.

Allow me to assure the Society that however unworthy I may be of the honor, it will stimulate me to greater devotion to a profession, to which I have given the best energies of my life.

With many thanks to the Society for this expression of their favor, and to yourself for the kind manner in which that favor was conveyed,

I am very truly yours,

A. B. PALMER.

CINCINNATI, OHIO, *Feb.* 28, 1865.

My Dear Sir—I have the honor of acknowledging the receipt of your letter, informing me of my election as an honorary member of the New

York State Medical Society, and the accompanying certificate of membership.

For this mark of the confidence of the Society I am deeply grateful, and pray you to convey to them my sincere thanks. Will you do me the further favor to send to me a copy of the Proceedings of the Society for the last two sessions.

I congratulate you upon your appointment as Surgeon General of the State. Being my own State, I can of course never lose my interest in anything that concerns her.

Yours faithfully,

CHARLES S. TRIPLER,

Col. U. S. A., and Med. Director Northern Dep't.

S. D. Willard, M. D., *Secretary N. Y. State Medical Society, Albany, N. Y.*

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261 Broad Street, Newark, N. J., *Feb.* 24, 1865.

Dr. S. D. Willard:

Dear Sir—Yesterday's mail brought me your kind favor, and the accompanying certificate, informing me of the honor conferred by the New York Medical Society, in electing me an honorary member.

For yourself please accept my thanks, and allow me through you to express them to the Medical Society, and assure them that I greatly appreciate the honor conferred on me, and that it will be my endeavor in the future to sympathize with them in all measures calculated to promote the "healing art."

Truly yours,

L. A. SMITH.

ARTICLE XXXII.

List of Honorary Members of the State Medical Society.

[The election of Honorary Members is authorized by statute. The Society, in its by-laws, after declaring that certain individuals shall be Honorary Members, by virtue of their present or previous offices, have directed that only two Honorary Members shall be annually elected, having been nominated at least a year previous.]

On motion of Dr. Staats, it was

Resolved, To elect to Honorary Membership non-residents of the State of New York.

By Dr. B. Fordyce Barker:

Resolved, That section fifteen of the by-laws be amended in accordance with the report of the committee, striking out the word *two* and inserting the word *six*, so as to elect not more than six Honorary Members yearly. [Transactions 1859, page 412.]

		Elected February.
Drs.	*Benjamin Rush, Philadelphia. Obit. 1813. Æt. 68.....	1808
	*Nathan Smith, New Haven. Obit. 1829. Æt. 67	1808
	*John Pomeroy, Burlington, Vt.....	1808
	*John Miller, Cortland, N. Y. Obit. March 30, 1862. Æt. 87.	1808
	*Moses Willard, New York. Obit. Dec. 6, 1826. Æt. 66....	1808
	*John Warren, Boston. Obit. April 4, 1815. Æt. 62.....	1810
Rev.	*Alexander Proudfit, Salem, N. Y.....	1810
Drs.	*Samuel L. Mitchill, New York. Obit. Sept. 7, 1831. Æt. 67.	1811
	*David Hosack, New York. Obit. Dec. 22, 1835. Æt. 67....	1811
	*Nicholas Romayne, New York. Obit. 1817. Æt. 61	1812
	*John Stearns, New York. Obit. 1849. Æt. 78	1812
	*Lyman Spaulding, New York. Obit. Oct. 31, 1821. Æt. 46.	1819
	*George C. Shattuck, Boston. Obit. March 18, 1854.....	1819
	James Hadley, Buffalo, N. Y.....	1817
	*John Murray, Edinburgh	1817
	*Wright Post, New York. Obit. June 14, 1828. Æt. 61	1819
	*John C. Warren, Boston. Obit. May 4, 1856. Æt. 78	1819
	*Valentine Mott, New York	1820
	*Josiah Noyes, New York.....	1823
	*Nathan'l Chapman, Philadelphia. Obit. July 1, 1853. Æt. 73.	1823
	*Daniel Drake, Cincinnati. Obit. Nov. 6, 1852. Æt. 67	1824
	*John D. Henry, Rochester, N. Y.....	1824
	*Philip S. Physick, Phila. Obit. Dec. 15, 1837. Æt. 70.....	1825
	*Joseph Gallup, Burlington, Vt. Obit. Oct. 1849. Æt. 81 ...	1825
	*Joseph Lovell, Washington, D. C. Obit. Oct. 17, 1836.. ...	1827

* Deceased.

		Elected February
Drs.	*John Onderdonk, New York	1827
	John Lizars, Edinburgh	1828
	*Wm. Hammersly, New York. Obit. 1833	1828
	*Samuel White, Hudson, N. Y. Obit. 1845. Æt. 68	1829
	*J. Augustine Smith, Virginia	1829
	*Eli Ives, Connecticut. Obit. 1861. Æt. 83	1830
	John W. Gloninger, Lebanon, Pennsylvania	1830
	*George McClellan, Phila. Obit. May 8, 1847. Æt. 51	1831
	*Eli Todd, Connecticut. Obit. Nov. 17, 1833. Æt. 64	1831
	*Thomas C. James, Phila. Obit. July 25, 1835. Æt. 69	1832
	*Thomas W. Henry, Kings county, N. Y	1832
	Reuben D. Mussey, Ohio	1833
	Walter Channing, Massachusetts	1833
	James Conquest Cross, Kentucky	1834
	*Alfred T. Magill, Virginia	1834
	Samuel Jackson, Philadelphia	1835
	*John Eberle, Ohio. Obit. Feb. 2, 1838. Æt. 50	1835
	Robley Dunglison, Philadelphia	1836
	*Thomas Sewall, Washington, D. C. Obit. 1845	1836
	*Luther V. Bell, Massachusetts. Obit. Feb. 11, 1862. Æt. 55.	1837
	Charles D. Meigs, Pennsylvania	1837
	*Daniel Oliver, New Hampshire. Obit. 1842. Æt. 56	1838
	*William Tully, Connecticut. Obit. 1859. Æt. 74	1838
	Jacob Bigelow, Massachusetts	1839
	*Jonathan Knight, New Haven, Conn. Obit. 1864	1839
	Placido Portal, Palermo	1840
	George B. Wood, Philadelphia	1830
	Hugh L. Hodge, Pennsylvania	1841
	Benjamin W. Dudley, Lexington, Ky	1841
	Jerome V. C. Smith, Boston, Mass	1842
	Isaac Hays, Philadelphia, Penn	1842
	*Enoch Hale, Boston. Obit. 1848	1843
	Willard Parker, New York	1843
	*Amariah Brigham, New York. Obit. Sept. 9, 1849. Æt. 50.	1844
	John S. Peters, Connecticut	1844
	*Lewis C. Beck, New Jersey. Obit. April 20, 1853 Æt. 55.	1845
	Landon C. Rives, Cincinnati, O	1845
	Mat. Stevenson, Newburgh, Orange county, N. Y	1846
	Alexander H. Stevens, New York	1846
	*Seth Hastings, Oneida county, N. Y	1847
	Henry H. Childs, Pittsfield, Mass	1847
	Woodbridge Strong, Boston, Mass	1848
	Frederic May, Washington, D. C	1848
	Alonzo Clark, New York	1849
	*Joseph Parish, Phila. Obit. March 18, 1840. Æt. 61	1849

* Deceased.

		Elected February.
Drs.	Stephen Mosher, Cincinnati	1851
	George W. Norris, Philadelphia	1852
	Samuel S. Purple, New York	1852
	Abraham Sager, Michigan	1853
	*John W. Francis, New York. Obit. 1861. Æt. 71	1853
	John P. Batchelder, New York	1854
	Henry L. Sabin, Williamstown, Mass	1854
	*Marshall Hall, London	1855
	Horace A. Buttolph, New Jersey	1855
	Samuel D. Gross, Philadelphia	1856
	*Chas. Hooker, New Haven, Ct. Obit. March 19, 1863. Æt. 61	1856
	John Rolph, Toronto, C. W	1857
	Henry Julian Hunter, Sheffield, Eng	1857
	*Marshal S. Perry, Boston	1858
	Samuel Henry Dickson, Charleston, S. C	1858
	Silas Durkee, Boston	1859
	John De La Mater, Cleveland, O	1859
	Alfred Stille, Philadelphia	1860
	George Mendenhall, Cincinnati, O	1860
	J Mason Warren, Boston	1860
	Warren Stone, New Orleans, La	1860
	Ernest Hart, London, Eng	1860
	Benjamin Hopkins Catlin, Meriden, Conn	1860
	James R. Wood, New York	1861
	Zina Pitcher, Detroit, Michigan	1861
	Dixi Crosby, Hanover, N. H	1861
	Pliny A. Jewett, New Haven, Conn	1861
	D. Humphreys Storer, Boston, Mass	1861
	W. Fraser, Montreal, Canada West	1861
	T. G. Geoghegan, Dublin	1862
	Ashbel Woodward, Franklin, Conn	1862
	John Jeffries, Boston	1862
	William Carpenter, London	1862
	Henry Bronson, New Haven, Conn	1862
	John M. Cuyler, U. S. Army	1863
	W. Braithwait, London	1863
	Thomas Jennings, Nashville, Tenn	1863
	Pinckney Webster Ellsworth, Hartford, Conn	1863
	R. S. Satterlee, U. S. Army	1863
	Samuel W. Butler, Philadelphia	1863
	William W. Rutherford, Harrisburgh, Penn	1864
	James Adams Allen, Michigan	1864
	Oliver P. Hubbard, Hanover, N. H	1864
	William J. Sloan, U. S. Army	1864

* Deceased.

Drs.	Stephen Wickes, Orange, New Jersey	1864
	James Couper, New Castle, Delaware	1864
	Wilson Jewell, Philadelphia	1865
	Josiah G. Beckwith, Litchfield, Conn	1865
	Lyndon A. Smith, Newark, N. J	1865
	Charles S. Tripler, U. S. A	1865
	Charles A. Pope, St. Louis, Mo	1865
	Abraham B. Palmer, Ann Arbor, Michigan	1865

ARTICLE XXXIII.

List of Permanent Members.

[*Statute passed February* 6, 1845. It shall and may be lawful for the Medical Society to elect annually, such a number of permanent members as they may from time to time determine by their by-laws, not to exceed two annually from any one Senatorial district.]

Resolution adopted by the State Medical Society, February 5, 1845:

Resolved, That this meeting shall not elect, annually, more than one permanent member from each Senatorial district in this State, and after the close of this session, no person shall be elected a permanent member until the last year of his term as delegate, or shall have resigned his place as such, or shall have been recommended by a county medical society.

By Dr. Hun, to amend resolution of 1845, so as to elect two permanent members annually, from each Senatorial district, this resolution having been passed at a previous meeting, but having failed of being recorded, the amendment was adopted. (1854.)

Resolved, That in case of the death of a member of this Society, it shall be the duty of the nearest censor in the district in which he resided, to transmit to the Secretary a professional obituary, of suitable length, for publication in the Transactions of the Society.

Resolved, That it shall be the duty of the Secretary to cause to be published in the yearly Transactions of this Society, a list of living members thereof, with the above resolution appended thereto, and at each meeting to call the roll of members, and if any are reported as having died during the year, the presiding officer shall appoint some member to perform the above duty. (Trans. 1849, p. 93.)

Names.	County.	Year.
Drs. *Nicholas Romayne, Obit. 1817. Æt. 67.....	New York...	1813
*Samuel Bard, Obit. May 24, 1821. Æt. 80....	.....	1813
*William Wilson, Obit. 1829.....	Columbia ...	1814
*John Stearns, Obit. 1849. Æt. 75.....	.....	1814
*Chas. D. Townsend, Obit. Dec. 19, 1847. Æt. 69		1815
*John Ely.....	.....	1815
*Westel Willoughby, Obit. Oct. 3, 1844. Æt. 75		1816
*David Hosack, Obit. 1835. Æt. 67.....	.....	1816
*Samuel L. Mitchill, Obit. Sept. 7, 1831. Æt. 67	New York...	1817
*T. Romeyn Beck, Obit. Nov. 19, 1855. Æt. 64.	Albany	1817
*Joseph White, Obit. June 2, 1832. Æt. 70....	Otsego	1818

* Deceased. [Those whose names are in small capitals have been Presidents of the Society. I shall be obliged to any person who will forward to me information of the place of residence of any permanent or honorary member not now recorded; and the age and time of death of any deceased member, or person who has received the honorary degree on recommendation of this Society.—W. H. Bailey, Secretary, Albany.]

	Names.	County.	Year.
Drs.	*Cornelius E. Depew, Obit. 1822		1818
	*William Bay		1819
	*Lyman Spaulding		1819
	*Felix Pascalis, Obit. July 27, 1833. Æt. 71		1820
	*Amos G. Hull		1820
	*Charles Drake, Obit. 1835	New York	1821
	*Peter Wendell, Obit. Oct. 31, 1849. Æt. 63	Albany	1821
	*Jas. R. Manley, Obit. 1851. Æt. 69	New York	1822
	*Alex. Coventry, Obit. 1831. Æt. 65	Oneida	1822
	*Luther Guiteau, Obit. 1850		1823
	*Thos. Brodhead, Obit. 1830 Æt. 65		1823
	*John H. Steele	Saratoga	1824
	Laurens Hull, Angelica	Allegany	1824
	*Jonathan Eights, Obit. Aug. 10, 1848. Æt. 75		1825
	*Henry Mitchell, Obit. Jan. 12, 1856 Æt. 72		1825
	*John Watts, jr., Obit. Feb. 4, 1831. Æt. 45		1826
	*Daniel Ayres, Obit. May 25, 1853. Æt. 66		1826
	Elial T. Foote, New Haven, Ct		1827
	*John Cheeseman, Obit. Oct. 11, 1862. Æt. 75.	N. Y. city	1827
	Platt Williams, Alder Creek	Oneida	1828
	*Richard Pennel, Obit. April 11, 1861. Æt. 62.	N. Y. city	1828
	*John B. Beck; Obit. April 9, 1851. Æt. 56		1829
	*H. W. Doolittle, Obit. 1853. Æt. 64		1829
	*Moses Hale, Obit. Jan. 3, 1837. Æt. 57		1830
	*Alpheus S. Greene		1830
	Edward G. Ludlow, New York city		1831
	James McNaughton, Albany	Albany	1831
	*Joel A. Wing, Obit. Sept. 6, 1852. Æt. 64	Albany	1832
	Joel Foster, New York city	New York	1832
	John G. Morgan, St. Louis		1833
	*Samuel White, Obit. 1845. Æt. 68	Columbia	1833
	*William Taylor, Manlius	Onondaga	1834
	*William Horton, jr		1834
	*Thos. Spencer, Obit. May 30, 1857. Æt. 65		1835
	*Samuel McClellan, Obit. April 8, 1855. Æt. 68		1835
	*Sumner Ely, Obit. Feb. 3, 1857. Æt. 70	Otsego	1836
	*Robert G. Frary, Hudson, Ob. Dec. 29, '62. Æt.	Columbia	1836
	*Bryant Burwell, Buffalo	Erie	1837
	*Calvin W. Smith		1837
	*A. G. Benedict, Red Hook, Obit. Oct. 4, 1862. Æt. 72	Dutchess	1838
	John McCall, Utica	Oneida	1838
	Phineas Hurd		1839
	Eli Pearce		1839
	*John McClelland, Obit. Oct. 18, 1855. Æt. 83.		1840
	Charles S. Goodrich, Brooklyn	Kings	1840
	Charles B. Coventry, Utica	Oneida	1841

* Deceased.

	Names.	County.	Year.
Drs.	Peter Van OLinda, Albany	Albany	1841
	Chandler R. Gillman, N. Y. city		1842
	Lake I. Tefft		1842
	*Lester Green		1843
	*E. B. Burroughs		1843
	*John R. Rhinelander, Ob. May 8, 1857. Æt. 65	New York	1844
	Henry Maxwell		1844
	Thomas W. Blatchford, Troy	Rensselaer	1845
	Augustus Willard, Greene	Chenango	1845
	Stephen H. Hasbrouck		1845
	*Merritt H. Cash, Obit. April 26, 1861. Æt. 59.		1845
	Ferris Jacobs, Delhi	Delaware	1845
	John R. Brown		1845
	Reuben Goodale		1845
	William D. Purple, Greene	Chenango	1845
	Alexander Thompson, Aurora	Cayuga	1845
	Charles Winne		1845
	Henry Van Hovenburgh		1846
	James Fountain		1846
	John H. Wheeler, Athens	Greene	1846
	Simeon Snow, Root	Montgomery.	1846
	Benjamin E. Bowen, Mexico	Oswego	1846
	N. S. Davis, Chicago, Ill		1846
	Harman Van Deusen		1846
	Maltby Strong, Rochester	Monroe	1846
	Willard Parker, New York city		1847
	Edmund F. Grant		1847
	Alden March, Albany	Albany	1847
	*Truman B. Hicks		1847
	*Thos. Goodsell, Utica, Obit. Jan. 12, 1864. Æt. 83	Oneida	1847
	*Nelson Winton, Havana, Obit. Aug. 27, 1864. Æt. 64	Schuyler	1847
	George W. Bradford, Homer	Cortland	1847
	Alden S. Sprague		1847
	Richard A. Varick		1848
	Peter Van Buren, N. Y. city		1848
	*Wm. S. Norton, Ft. Edward, Ob. Feb. 20, 1863.	Washington	1848
	Jenks S. Sprague, Cooperstown	Otsego	1848
	Denison R. Pearl		1848
	*J. Edwin Hawley, Ob. Aug 1, 1859. Æt. 57		1848
	Alexander H. Stevens, N. Y. city		1848
	John M. Pruyn, Kinderhook	Columbia	1849
	Morgan Snyder, Fort Plain	Montgomery.	1849
	Patrick H. Hard		1849
	Dyer Loomis, New Berlin	Chenango	1849
	Enos Barnes		1849
	Alonzo Clark, N. Y. city		1850

* Deceased.

	Names.	County.	Year.
Drs.	Nathaniel Miller		1850
	Thomas C. Brinsmade, Troy	Rensselaer	1850
	Hiram Corliss, Greenwich	Washington	1850
	Helon F. Noyes		1850
	S. H. French, Lisle	Ontario	1850
	*Daniel T. Jones, Ob. March 29, 1861. Æt. 60.	Onondaga	1850
	Seth H. Pratt		1850
	Barent P. Staats, Albany	Albany	1851
	*Bartow White, Obit. Dec. 11, 1862. Æt. 87	Dutchess	1851
	Orson M. Allaben	Delaware	1851
	Joseph White, Canajoharie	Montgomery	1851
	Daniel P. Thomas, Utica	Oneida	1851
	*Silas West, Obit. Aug. 27, 1859. Æt. 67	Broome	1851
	John E. Todd, Philadelphia, Pa		1851
	Frank H. Hamilton		1851
	James H. Armsby, Albany	Albany	1852
	Samuel Shumway, Essex	Essex	1852
	Nicol H. Dering, Utica	Oneida	1852
	*Royal Ross		1852
	Jehial Stearns, Pompey	Onondaga	1852
	Charles E. Ford		1852
	Benjamin Drake		1853
	Joseph Bates, Lebanon Springs	Columbia	1853
	A. Van Dyck, Oswego	Oswego	1853
	Phineas H. Burdick, Preble	Cortland	1853
	James M. Gardiner		1853
	A. F. Doolittle, Herkimer	Herkimer	1853
	E. L. Hart		1853
	George N. Burwell, Buffalo	Erie	1853
	Thomas F. Cock, New York city		1854
	Wm. Rockwell, New York city		1854
	Charles A. Lee, Peekskill	Westchester	1854
	*L. S. Turner, Fallsburgh, Obit. 1860. Æt. 49	Sullivan	1854
	Thomas Hun, Albany	Albany	1854
	James Thorn, Troy	Rensselaer	1854
	Oliver Brisbane		1854
	*Henry Reynolds, Obit. Dec. 20, 1857. Æt. 68		1854
	*Arba Blair, Rome, Obit. June 20, 1863. Æt. 82	Oneida	1854
	F. T. Maybury, Morrisville	Madison	1854
	Azariah B. Shipman, Syracuse	Onondaga	1854
	Frederick Hyde, Cortlandville	Cortland	1854
	J. R. Smith, Riga	Monroe	1854
	James P. White, Buffalo	Erie	1854
	George Burr, Binghamton	Broome	1854
	W. G. Sands, Oxford	Chenango	1854
	James R. Wood, New York city	New York	1855
	B. Fordyce Barker, New York city		1855

* Deceased.

Names.	County.	Year.
Philander Stewart, Peekskill	Westchester.	1855
G. C. Monell, Newburgh	Orange	1855
Alfred Wotkyns, Troy	Rensselaer	1855
*Ebenezer Steele		1855
Freeman Turtelot, Middlegrove	Saratoga	1855
Henry C. Gray, N. White Creek	Washington	1855
Luther Guiteau, Trenton	Oneida	1855
Augustus L. Saunders, Brookfield	Madison	1855
Marcena Terry		1855
A. B. Case		1855
John Coventry		1855
*Edson Carr, Obit. 1861. Æt. 60	Ontario	1855
Austin Flint, New York city	New York	1855
*John B. Coates, Batavia	Genesee	1855
James L. Phelps, New York city		1856
Horace Green, New York city		1856
D. C. Winfield, Middletown	Orange	1856
Howard Townsend, Albany	Albany	1856
Elbridge Simpson, Hudson	Columbia	1856
Jacob G. Snell, Amsterdam	Montgomery	1856
Abram Haun, Little Falls	Herkimer	1856
Daniel P. Bissell, Utica	Oneida	1856
Peter McNaughton, Albany	Albany	1856
John Gray Orton, Binghamton	Broome	1856
*Jotham Purdy, Obit. Aug. 11, 1858. Æt. 59	Broome	1856
James V. Kendall, Clay	Onondaga	1856
J. P. Dunlap, Onondaga	Onondaga	1856
*Fred. F. Backus, Obit. Nov. 4, 1858. Æt. 64		1856
E. W. Armstrong, Rochester	Monroe	1856
Stephen Smith, New York		1857
Samuel Hart, Brooklyn	Kings	1857
George J. Fisher, Sing Sing	Westchester.	1857
Wm. S. Preston, Patchogue	Suffolk	1857
*C. V. W. Burton, Obit. Sept. 23, 1860. Æt. 51	Rensselaer	1857
*Mason F. Cogswell, Albany, Obit. Jan. 21, 1865	Albany	1857
James Diefendorf, Fort Plain	Montgomery.	1857
*Abel Green, Paine's Hollow, Obit. 1862	Herkimer	1857
Gilson A. Dayton, Mexico	Oswego	1857
M. M. Bagg, Utica	Oneida	1857
*Levi Farr, Obit. July 18, 1859. Æt. 72	Chenango	1857
J. C. Morse		1857
*A. F. Oliver, Penn Yan, Obit. 1857, Æt, 65	Yates	1857
Jonathan Kneeland, South Onondaga	Onondaga	1857
Francis L. Harris		1857
Sanford B. Hunt, Buffalo	Erie	1857
Ed. H. Parker, Poughkeepsie	Dutchess	1858

* Deceased.

Names.	County.	Year.
Nathaniel C. Husted, New York city	.....	1858
William W. Strew, Oyster Bay	Queens	1858
Wm. Govan, North Haverstraw	Rockland ...	1858
*Sylvester D. Willard, Albany, Obit. April 2, '65	Albany	1858
Edward Hall, Auburn	Cayuga	1858
William Tibbits, Mechanicsville	Saratoga....	1858
Tabor B. Reynolds, Wilton	Saratoga....	1858
Charles G. Bacon, Fulton	Oswego.....	1858
James M. Sturtevant, Rome	Oneida	1858
Seneca Beebe, McDonough	Chenango ...	1858
Alfred Bolter	Ontario	1858
Caleb Green, Homer	Cortland	1858
Warren Fay, Pavilion	Genesee	1858
W. Ellsworth	.....	1858
Franklin Tuthill, San Francisco, Cal	.....	1859
John Ball, Brooklyn	Kings	1859
Seth Shove, Katonah	Westchester.	1859
Moses C. Hasbrouck, Nyack	Rockland ...	1859
James P. Boyd, Albany	Albany	1859
Horace K. Willard, Catskill	Greene	1859
Uriah Potter, Hallsville	Montgomery.	1859
Richard L. Allen, Saratoga Springs	Saratoga....	1859
Henry N. Porter, Lee Centre	Oneida	1859
John Putnam, Madison	Madison	1859
C. Milford Crandall, Belfast	Allegany....	1859
Stephen Hagadorn, Cohocton	Steuben.....	1859
Alexander J. Dallas, Camillus	Onondaga...	1859
John F. Trowbridge, Syracuse	Onondaga...	1859
Phineas H. Strong, Buffalo	Erie	1859
Horace M. Conger, Buffalo	Erie	1859
John H. Griscom, New York	.....	1860
Elisha Harris, New York	.....	1860
John Demarest, Spring Valley	Rockland ...	1860
Wm. P. Townsend, Goshen	Orange	1860
S. Oakley Vanderpoel, Albany	Albany	1860
Wm. P. Seymour, Troy	Rensselaer ..	1860
Darius Clark, Canton	St. Lawrence	1860
Benjamin Moore	Clinton	1860
V. W. Mason, Canastota	Madison	1860
Charles Barrows, Clinton	Oneida	1860
Pelatiah B. Brooks, Binghamton	Broome	1860
James H. Jerome, Trumansburgh	Tompkins ...	1860
M. M. Marsh, Manlius	Onondaga...	1860
Harvey Jewett, Canandaigua	Ontario	1860
*C. H. Wilcox, Buffalo	Erie	1860
Levant B. Cotes, Batavia	Genesee	1860
John G. Adams, New York city	.....	1861

* Deceased.

	Names.	County.	Year.
Drs.	John McNulty, New York city	.....	1861
	C. W. Haight, Pleasantville	Westchester.	1861
	J. Foster Jenkins, Yonkers	Westchester.	1861
	John V. P. Quackenbush, Albany	Albany	1861
	Reed B. Bontecou, Troy	Rensselaer ..	1861
	James Lee, Mechanicsville	Saratoga....	1861
	A. E. Varney, Little Falls	Herkimer ...	1861
	*Franklin Everts, Oswego, Obit. Feb. 12,'64. Æt. 36	Oswego.....	1861
	Austin White, Parish	Oswego.....	1861
	Charles S. Wood, Greene	Chenango ...	1861
	C. M. Kingman, McGrawville	Cortland	1861
	Nelson Nivison, Hector	Schuyler	1861
	Joseph N. Northrop, Albany	Albany	1861
	Charles C. F. Gay, Buffalo	Erie	1861
	Edward R. Squibb, Brooklyn	Kings	1861
	E. R. Peaslee, New York city	.....	1862
	Thomas C. Finnell, New York	.....	1862
	Abraham Crispell, Rondout	Ulster	1862
	John D. Watkins, Liberty	Sullivan	1862
	S. M. Van Alstyne, Richmondville	Schoharie ...	1862
	Samuel H. Freeman, Albany	Albany	1862
	Theo. L. Mason, Brooklyn	Kings	1862
	H. A. Carrington, Lansingburgh	Rensselaer ..	1862
	J. V. Cobb, Rome	Oneida	1862
	A. G. Purdy, Oneida	Madison	1862
	P. Brooks, Binghamton	Broome	1862
	E. S. Lyman, Sherburne	Chenango ...	1862
	Harvey B. Wilbur, Syracuse	Onondaga ...	1862
	Joseph Beattie, Geneva	Ontario	1862
	John Boardman, Buffalo	Erie	1862
	Charles E. Van Anden, Auburn	Cayuga	1862
	Henry T. Downs, New York city	.....	1863
	Henry D. Bulkley, New York city	.....	1863
	Lewis F. Pelton, Mount Kisko	Westchester.	1863
	John R. Cooper	Dutchess	1863
	Jacob Newkirk	Delaware	1863
	John Swinburne, Albany	.....	1863
	James Ferguson, Glens Falls	Warren	1863
	Alexander Ayers, Fort Plain	Montgomery.	1863
	J. K. Chamberlayne, Cazenovia	Madison	1863
	Wm. H. H. Parkhurst, Frankfort	Oneida	1863
	George Cook, Canandaigua	Ontario	1863
	C. V. Barnett, Windham Centre	Greene	1863
	Henry W. Dean, Rochester	Monroe	1863
	Douglas Bly, Rochester	Monroe	1863
	Josiah Rathbun, Utica	Oneida	1863
	*Hiram Adams, Fabius. Ob. March 9, '65. Æt. 62	Oneida	1863

* Deceased.

	Names.	County.	Year.
Drs.	Joseph C. Hutchison, Brooklyn	Kings	1864
	S. A. Purdy	New York	1864
	Peter Moulton, New Rochelle	Westchester.	1864
	Charles McMillen, Fordham	Westchester.	1864
	William H. Bailey, Albany	Albany	1864
	A. D. Hull, Lansingburgh	Rensselaer	1864
	J. B. Reynolds	Saratoga	1864
	H. S. Chubbuck, Elmira	Chemung	1864
	James S. Whaley, Rome	Oneida	1864
	Samuel G. Woolcott, Utica	Oneida	1864
	William H. Fish, Meclenburgh	Schuyler	1864
	E. M. Alba	Allegany	1864
	Samuel Avery, Baldwinsville	Onondaga	1864
	J. Towler, Geneva	Ontario	1864
	John Root, Batavia	Genesee	1864
	Solomon Barrett, Le Roy	Genesee	1864
	Oliver White, New York city		1865
	James M. Minor, Brooklyn		1865
	John W. Greene, New York city		1865
	Edmund S. F. Arnold, Yonkers	Westchester.	1865
	Peter P. Staats, Albany		1865
	John Ferguson, Davenport	Delaware	1865
	Griffin Sweet, Fairfield	Herkimer	1865
	Asa D. Hammond, Essex	Essex	1865
	John P. Gray, Utica	Oneida	1865
	Jacob Hurt, Utica	Oneida	1865
	Marcus M. Wood, Greene	Chenango	1865
	Uriah G. Bigelow, Albany	Albany	1865
	E. W. Bottum, Lyons	Wayne	1865
	Julien T. Williams, Dunkirk	Chautauqua	1865
	Isaac E. Taylor, New York city		1865
	Sanford Eastman, Buffalo	Erie	1865

ARTICLE XXXIV.

List of Physicians on whom the honorary degree of Doctor of Medicine has been conferred by the Regents of the University, on the recommendation of the State Medical Society.

[The Society is restricted by statute from nominating more than four persons to the honorary degree of Doctor of Medicine in any one year. And by various resolutions it has been determined that the respective candidates shall possess moral and professional standing, shall be of the age of forty-five years or upwards, and shall receive not less than two-thirds of the votes of the members present. The mode of nomination shall be as follows:

The Society shall, by open nomination, present the names of any number of physicians, and afterwards the names of the candidates, or such of them as each member shall please to vote for; not to exceed four shall be voted for in one ballot, and so many as, on this ballot, shall appear to have received two-thirds of all the votes of the members present, and those only, shall be the persons presented.]

1827....*Drs. John Onderdonk, New York.
*Jonathan Eights, Albany, Obit. 1848.
Laurens Hull, Oneida.
James Stevenson, Cambridge, Washington county.
*Thomas Fuller, Otsego.
*Gain Robinson, Wayne.

1828.... *Thomas Broadhead, Columbia.
*John D. Henry, Monroe.
*Eleazer Gedney, Orange, Obit. 1832.

1829.... *Joseph Hunt, Kings.
*John H. Steele, Saratoga.
Henry H. Sherwood, Jefferson.
*Daniel Ayres, Montgomery.

1830.... *Charles D. Townsend, Albany.
*Matson Smith, Westchester.
Enos Barnes, Yates.
*Consider King, Cayuga.

1831.... *Thomas Dunlap, Schenectady, Obit. 1860. Æt. 82.
*Samuel Porter, Onondaga.
*John McClellan, Columbia.
*John Ely, Greene.

1832.... George W. Phillips, Tompkins.
*Alpheus S. Greene, Jefferson, Obit. Feb. 25, 1851. Æt. 64
*Fayette Cooper, New York.
*Thomas O. H. Croswell, Greene.
Lucius Kellogg, Queens.

1833.... Joshua Lee, Yates.
Asahel Prior, Madison.
Josiah Trowbridge, Erie.
Benjamin J. Mooers, Clinton.

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* Deceased.

1834....Drs. Robert Collins, Rensselaer.
George Eager, Orange.
Asa Fitch, Delaware.
*Harvey W. Doolittle, Herkimer.
1841.... Henry B. Moore, Onondaga.
Cladius C. Cone, Seneca.
John Merriam, Columbia.
*Richard S. Bryan, Rensselaer.
1842.... *Levi Farr, Chenango, Obit. July 18, 1859. Æt. 72.
William C. Dewitt, Ulster.
Lester Jewett, Seneca.
*Thomas Goodsell, Oneida, Obit. Jan. 12, 1864. Æt. 83.
1844.... Peter Van OLinda, Albany.
William W. Miner, New York.
*Matthias B. Bellows.
Samuel Maxwell.
1845.... *Bartow White, Dutchess, Obit. Dec. 11, 1862. Æt. 87.
Samuel Shumway, Essex.
William Mason, Chenango.
*Andrew F. Oliver, Yates.
1846.... Greene Miller, Ulster.
*Truman B. Hicks, Warren.
*Ithamar B. Crawe, Jefferson.
George W. Bradford, Cortland.
1847.... Pelatiah B. Brooks, Broome county.
Caleb Bannister.
Hiram Corliss, Washington.
John W. Weed, New York.
1848.... Eliphalet Platt, Dutchess.
Benjamin E. Bowen, Oswego.
*Joshua Webster, Montgomery, Obit. 1849. Æt. 78.
George C. Scheffer, New York.
1849.... William D. Purple, Chenango.
Lewis Riggs, Cortland.
*Arba Blair, Oneida.
John W. Riggs, Montgomery.
1850.... John E. Todd, Onondaga.
James Thorn, Rensselaer.
Patrick H. Hard, Oswego.
*Nathanial Miller, Suffolk.
1851.... Purcell Cook, Kings.
Phineas H. Burdick, Cortland.
*Heman Norton, Oneida, Obit. 1856. Æt. 75.
1852.... *Mason G. Smith, Wyoming, Obit. April 10, 1857.
Abel Huntington, Suffolk.
Erastus King, Otsego.
Abel Brace, Greene.

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* Deceased.

1854....Drs. Sardius Brewster, Austinboro, Ohio.
Elias P. Metcalf, Livingston.
Jacob G. Snell, Montgomery.
*John W. Hinckley, Albany, Obit. 1860. Æt. 56.
1855.... Jonathan Kneeland, Onondaga.
James L. Phelps, New York.
A. Churchill, Otsego.
*Edson Carr, Ontario, Obit. 1861. Æt. 60.
1856.... *Hiram Adams, Onondaga, Obit. March 9, 1865. Æt. 62.
*Silas West, Broome.
Samuel J. Swalm, Kings.
Medina Preston, Sangerfield, Oneida.
1857.... *Wm. S. Norton, Washington, Obit. Feb. 20, 1863. Æt. 66.
Hiram Wotkins, Rensselaer.
Millen Barnett, Madison.
Daniel H. Bissell, Livingston.
1858.... William L. Appley, Sullivan.
*William Rockwell, New York.
James Hogaboom, Rensselaer.
Nelson S. Garrison, Kings.
1859.... Peter P. Staats, Albany.
James M. Sturtevant, Oneida.
*Merit H. Cash, Orange, Obit. 1861. Æt. 59.
Richard Lanning, Tompkins.
1860.... Francis J. D'Avignon, Clinton.
Harrison Teller, Kings.
Peter Moulton, Westchester.
1861.... Charles G. Bacon, Oswego.
Charles Barrows, Oneida.
1864.... Leonard G. Warren, Albany.
R. Spencer Chapin, New York city.
1865.... Ferris Jacobs, Delhi, Delaware.
Richard L. Satterlee, U. S. Army.

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* Deceased.

ARTICLE XXXV.

List of persons eligible for election as Permanent Members.

[By a resolution passed during the session of the Society in 1829, it was resolved that hereafter no person be elected a Permanent Member unless he has served as a delegate and been nominated at a previous anniversary meeting.]

No. of District.		Nominated.
3.	Drs. Abram D. Spoor	1854
4.	Walter Mott, Saratoga	1854
3.	S. Smith	1856
5.	William H. Gardner, Oneida	1857
	F. Burton	1857
2.	John Purdue, Rockland	1857
1.	J. Marion Sims, New York	1858
8.	William Van Pelt	1858
2.	W. C. Anderson, Richmond county	1859
3.	Alexander H. Hoff, Albany	1859
1	William H. Dudley, Kings county	1860
1.	John A. Brady, Kings county	1860
1.	Samuel R. Percy, New York	1860
3.	A. Fitch, Delaware	1860
5.	Nelson J. Barnett, Oswego	1860
3.	Wm. M. Jones, Livingston, Columbia county	1861
1.	Jared Lindsley, New York	1862
1.	Alfred Underhill, New York	1862
1.	J. H. Hobart Burge, Brooklyn	1862
1.	C. L. Mitchell	1862
1.	John P. Garrish, New York	1862
2.	J. O. Van Hovenburgh	1862
2.	James Hart Curry, Westchester	1862
3.	Charles H. Porter, Albany	1862
5.	W. Taylor	1862
1.	Samuel L. Hubbard, New York city	1863
1.	Guido Furman, New York city	1863
1.	Lewis A. Sayre, New York city	1863
1.	Julius Auerbach	1863
1.	John Ordronaux	1863
1.	B. I. Raphael	1863
4.	R. Blawis, Fort Miller, Washington county	1863
5.	Isaac H. Douglas, Oneida	1863
1.	J. King Merritt, New York city	1864
1.	E. L. Beadle, New York city	1864
1.	James Kennedy, New York city	1864
1.	Cornelius R. Agnew, New York city	1864

1.	Drs. Louis Elsberg, New York city	1864
2.	John V. Holt, Amesville, Ulster county	1864
2.	Darling B. Whitney, East Norwich, Queens county	1864
3.	Henry B. Salmon, Stuyvesant Falls, Columbia	1864
3.	G. Botsford, Greenville, Greene county	1864
4.	E. W. Howard, Warrensburg, Warren county	1864
4.	M. L. Finch, Jonesville, Saratoga county	1864
4.	Thompson Burton, Montgomery county	1864
5.	J. E. Casey, Mohawk, Herkimer county	1864
6.	H. S. Harrington, Chenango Forks, Broome county	1864
7.	Darwin Colvin, Clyde, Wayne county	1864
1.	D. S. Conant	1865
1.	A. N. Bell, Brooklyn	1865
1.	Jerome V. C. Smith, New York	1865
1.	J. R. Van Kleek, New York	1865
2.	Avery Cook, Orange	1865
3.	William F. Carter, Cohoes	1865
3.	Levi Moore, Albany	1865
3.	John Pindar, Scoharie	1865
3.	C. C. Covell, Stamford, Delaware	1865
4.	Lyman Barton, Essex, Essex county	1865
4.	William H Richardson, Westport, Essex county	1865
5.	H. S. Crandall, Madison	1865
5.	James Whitford, Madison	1865
6.	W. S. Griswold, Broome	1865
6.	H. K. Bellows, Chenango	1865
7.	W. L. Stewart, Ontario	1865
7.	Samuel Gilmore, Cayuga	1865
	Israel Parsons, Onondaga	1865
	H. N. Eastman, Geneva, Ontario county	1865
	Joseph H. Richardson, Cayuga	1865

ARTICLE XXXVI.

List of persons eligible for election as Honorary Members.

[The election of Honorary Members is authorized by statute. The Society, in its by-laws, after declaring that certain individuals shall be Honorary Members by virtue of their present or previous offices, have directed that only two Honorary Members shall be annually elected, having been nominated at least a year previous.]

In 1855, on motion of Dr. Barent P. Staats, it was

Resolved, To elect to Honorary Membership non-residents of the State of New York only.

By Dr. B. Fordyce Barker,

Resolved, That section fifteen of the by-laws be amended, in accordance with the report of the committee, striking out the word *two* and inserting the word *six*, so as to elect not more than six Honorary Members yearly. (Transactions, 1859, p. 412.)

Nominated.	
1849.....	Drs. Stephen Mosier, Cincinnati, Ohio.
1855.....	Franklin Tuthill, California.
	John H. Ridell.
	Christopher Widner.
1856.....	N. D. Benedict, Florida.
1857.....	Bennett Dowler, New Orleans, Louisiana.
1862.....	N. S. Davis, Chicago.
	Joseph Carson, Philadelphia.
	Ralph Isham, Chicago.
1863.....	Ebenezer K. Hunt, Hartford, Conn.
	H. M. Knight, Lakeville, Conn.
	Ralph Deming, Litchfield, Conn.
	James Kirbuckle, Philadelphia.
1864.....	Prof. Albert Smith, Peterboro, N. H.
1865.....	C. E. Brown-Sequard.
	Wm. Warren Greene, Pittsfield, Mass.
	Middleton Goldsmith, Louisville, Ct.
	H. J. Stevens, St. Albans, Vermont.
	Samuel W. Thayer, Jr., Burlington, Vermont.

ARTICLE XXXVII.

Classification of counties as to the election of delegates.

[The first classification of counties was made pursuant to the statute of 1806, at the session of the Society in 1807. The additional counties subsequently erected were classified by virtue of powers given by the same statute, at the sessions of the Society held in 1813 and 1826. In case of the erection of any new county, the Secretary is directed to add the same, so as to keep the present number as nearly equal as possible.]

VACANT.

February 1, 1868.

Greene.
Dutchess.
Jefferson.
Ontario.
Essex.
Lewis.
Schoharie.
Niagara.
Warren.
Chautauqua.
Orleans.
Putnam.
Queens.
Fulton.
College of Physicians and Surgeons, New York.
Med. Fac. of Geneva Col.
Long Island College Hospital.
Bellevue Hosp. College....18.

VACANT.

February 1, 1869.

Albany.
Oneida.
Cayuga.
Otsego.
Saratoga.
Schenectady.
Tioga.
Cattaraugus.
Richmond.
Steuben.
Sullivan.
Tompkins.
Chemung.
Rockland.
N. Y. Medical College.
Albany Medical College.
Medical Department of University, Buffalo ....17.

VACANT.

February 1, 1866.

Westchester.
Columbia.
Ulster.
Madison.
Herkimer.
Chenango.
Washington.
Clinton.
Suffolk.
St. Lawrence.
Cortland.
Erie.
Hamilton.
Kings.
Wayne.
Medical Faculty of New York city University.
N. Y. Academy of Medicine.
Bellevue Hosp. College....18.

VACANT.

February 1, 1867.

New York.
Orange.
Delaware.
Onondaga.
Montgomery.
Rensselaer.
Genesee.
Seneca.
Allegany.
Broome.
Franklin.
Livingston.
Monroe.
Oswego.
Yates.
Wyoming.
Schuyler.....17.

Prize Essays.

ARTICLE XXXVIII.

MERIT H. CASH.

The attention of the profession is called to the prize offered by the Society through the munificent bequest of the late Merit H. Cash, M. D. The subject for the essay of 1866, is the same as proposed for 1865, viz: "The Pathology and Treatment of Chronic Diarrhœa, contracted in Camp and Malarious Regions, illustrated by Cases." There was but one essay offered in 1865, and that in the opinion of the committee was not of sufficient merit to secure the prize. It is hoped that a larger number of well digested essays will be presented to the committee from which to make selection.

The competition will be confined to residents of New York State. The successful essayist will receive a prize of about seventy dollars, or an equivalent, in such form as will best suit his taste.

The committee on prize essays are Dr. Thomas W. Blatchford, of Troy, Dr. Edward H. Parker, of Poughkeepsie, and Dr. John Ordronaux, No. 174 West 23d street, New York city, to either of whom the essays may be sent on or before the 15th day of December.

The name of the author should accompany the essay in a separate, sealed envelope. The name of the successful essayist will be announced at our next annual meeting in February, 1865; and the essay will be published in the Society's Transactions.

THOMAS C. BRINSMADE.

Another prize has been offered by Thomas C. Brinsmade, M. D., of Troy, for the best essay on "'Medical and Vital Statistics.' The essay must be accompanied by a plan for making and tabulating hospital reports, records of private practice in medicine, surgery, and obstetrics, together with a draft of a law for the registration of births, marriages and deaths. The prize to be awarded by the committee of the New York State Medical Society, on prize essays; the essay to be placed in the hands of the committee, with the plans and drafts, on or before the 15th of December next."

For this Dr. Brinsmade has offered the very liberal sum of one hundred dollars. The subject of registration is one of very great interest not only to the profession but to the whole community, and it is hoped that the interest manifested will be commensurate with the importance of the subject.

WM. H. BAILEY, *Secretary.*

Albany, *October* 26, 1865.

ARTICLE XXXIX.

List of Officers of County Medical Societies, 1865.

ALBANY COUNTY.

Officers.

Dr. Peter P. Staats, President.
Frank G. Mosher, Vice-President.
J. R. Boulware, Secretary.
F. L. R. Chapin, Treasurer.

Delegates to State Medical Society.

Dr. James L. Babcock, Dr. John V. Lansing,
Levi Moore, Peter P. Staats.

BROOME COUNTY.

Officers.

Dr. Wm. Bassett, President.
S. H. French, Vice-President.
J. G. Orton, Secretary.
E. G. Crafts, Treasurer.

Censors.

Dr. J. G. Orton, Dr. E. G. Crafts, Dr. P. B. Brooks,
Dr. George Burr, Dr. W. S. Griswold.

Delegate to State Medical Society.

Dr. W. S. Griswold.

Delegates to American Medical Association.

Dr. C. R. Heaton, Dr. Wm. Bassett.

List of Members.

Dr. Wm. Butler, Maine,
P. B. Brooks, Binghamton,
H. Hemingway, Whitney's Point,
S. H. French, Lisle,
John Hall, Upper Lisle,
George Burr, Binghamton,
J. G. Orton, do
S. H. Harrington, Chenango Forks,
J. D. Meacham, Triangle,
E. G. Craft, Binghamton,
P. M. Way, Kirkwood,
Dr. W. S. Griswold, Binghamton,
John Chubbuck, do
E. J. Ford do
Wm. Bassett, do
Wm. Voorhees, Lisle,
S. H. French, 2d do
C. R. Heaton, Maine,
S. B. Foster, Vestal,
G. Doyle, Binghamton,
Wm. J. Orton, Lisle.

COLUMBIA COUNTY.

Officers.

Dr. H. B. Salmon, of Stuyvesant Falls, President.
J. P. Wheeler, of Hudson, Vice-President.
P. V. S. Pruyn, of Kinderhook, Secretary and Treasurer.

Delegates to State Medical Society.

Dr. Whitbeck, Dr. H. B. Salmon.

DELAWARE COUNTY.

Officers.

Dr. C. C Covel, President.
S. Forman, Vice-President.
F. Jacobs, Secretary.
G. Ferguson, Treasurer.

Censors.

Dr. C. C. Covel, Dr. G. Ferguson, Dr. F. Jacobs,
Dr. McClaughey, Dr. S. Forman.

ERIE COUNTY.

Officers.

Dr. C. C. F. Gay, President.
George Abbott, Vice-President.
Leon F. Harvey, Secretary.
J. B. Sams, Librarian.
Wm. Ring, Treasurer.

Delegates to State Medical Society.

Dr. Sanford Eastman, Dr. Josiah Barnes,
C. C. Wycoff, E. Storck.

Primary Board.

Dr. Sanford Eastman, Dr. J. A. Peters, Dr. L. P. Dayton.

Censors.

Dr. S. W. Wetmore, Dr. S. F. Mixer, Dr. J. A. Peters,
Dr. J. R. Lothrop, Dr. P. H. Strong.

GENESEE COUNTY.

Officers.

Dr. I. W. Warner, President,
H. B. Miller, Vice-President
John Root, Secretary and Treasurer.

Censors.

Dr. L. B. Cotes, Dr. I. Rano, Dr. S. Barrett.
Dr. I. W. Warner, Dr. H. B. Miller.

Delegate to American Medical Association.

S. C. Bateman.

HERKIMER COUNTY.

Officers.

Dr. S. R. Millington, President.
James M. Rose, Vice-President.
V. C. Potter, Secretary.
John P. Sharrer, Treasurer.

KINGS COUNTY.

Officers.

Dr. Jos. C. Hutchison, President.
E. R. Squibb, Vice-President.
John S. Young, Secretary.
J. P. Colgan, Assistant Secretary.
A. Otterson, Treasurer.
G. J. Bennett, Librarian.

Censors.

Dr. D. C. Enos, Dr. J. T. Conkling, Dr. A. N. Bell,
Dr. D. S. Landon, Dr. A. Otterson.

Delegates to the State Medical Society.

Dr. C. L. Mitchell, Dr. A. N. Bell, Dr. J. M. Minor,
J. H. H. Burge, W. H. Williams, O. H. Smith.
J. A. Brady,

LEWIS COUNTY.

Officers.

Dr. Seth Adams, President.
Myron Nash, Vice-President.
Fred. Bischoff, Treasurer.
C. D. Budd, Secretary.

Censors.

Dr. C. D. Budd, Dr. S. P. Uhlien, Dr. H. S. Hendee.

Delegate to the State Medical Society.

Dr. C. D. Budd.

MADISON COUNTY.

Officers.

Dr. F. W. Root, President.
R. H. Gray, Vice-President.
A. Foord, Secretary and Treasurer.

Censors.

Dr. R. H. Gray, Dr. F. W. Root, Dr. W. M. Carpenter.
Dr. Amos Chesebro, Dr. E. S. Mumford.

Delegates to the American Medical Association.

Dr. A. L. Saunders, Dr. J. R. Chamberlayne,
J. Putnam, A. Foord.

Delegates to the State Medical Society.

Dr. H. S. Crandall, James Whitford.

MONROE COUNTY.

Officers.

Dr. E. W. Armstrong, President.
H. W. Dean, Vice-President.
David Little, Secretary.
Douglas Bly, Treasurer.

Censors.

Dr. W. W. Ely, Dr. R. C. Reynolds, Dr. E. M. Moore,
Dr. H. H. Langworthy, T. B. V. Durand.

NEW YORK COUNTY.

Officers.

Dr. Isaac E. Taylor, President.
Edmund R. Peaslee, Vice-President.
Ellsworth Eliot, Recording Secretary.
Henry S. Downs, Corresponding Secretary.
S. T. Hubbard, Treasurer.

Censors.

Dr. H. D. Bulkley, Dr. D. S. Conant, Dr. Wm. B. Bibbins,
Dr. S. Hanbury Smith, Dr. James O. Pond.

Committee on Diseases.

Dr. H. D. Bulkley, Dr. Wm. H. Thomson, Dr. J. L. Brown,
Dr. C. Ramsey, Dr. E. Bradley.

Committee on Intelligence.

Dr. A. Underhill, Dr. S. Hanbury Smith, Dr. J. S. Crane,
Dr. D. S. Conant, Dr. J. K. Merritt.

Meteorological Committee.

Dr. J. P. Loines, Dr. B. Drake, Dr. Wm. F. Thoms.

Library Committee.

Dr. H. M. Brush, Dr. J. Lynch, Dr. J. R. Mansfield.

Finance Committee.

Dr. Jos. Kennedy, Dr. H. P. Farnham, Dr. J. T. Garrish.

Delegates to the State Medical Society.

Dr. Wm. N. Blakeman, Dr. J. B. McEwen,
James J. Conolly, J. K. Merritt,
Louis Elsberg, J. O. Pond,

Dr. Guido Furman,
Charles Henschel,
S. T. Hubbard,
James Kennedy,
J. P. Loines,
Dr. A. S. Purdy,
W. H. Thomson,
A. Underhill,
J. R. Van Kleek,
G. F. Woodward,
Dr. J. L. Brown, to fill vacancy.

Delegates to the American Medical Association, elected Nov. 7, 1864.

Dr. H. D. Bulkley,
H. S. Downs,
Chris. Prince,
D. S. Conant,
J. O. Pond,
S. Hanbury Smith,
J. O. Farrington,
J. G. Adams,
J. Kennedy,
E. R. Peaslee,
E. Eliot,
H. P. Farnham,
Dr. S. T. Hubbard,
Guido Furman,
J. O. Stone,
A. Underhill,
T. C. Finnell,
A. Flint,
Charles Henschel,
I. E. Taylor,
J. R. Mansfield,
Wm. B. Bibbins,
H. D. Noyes,
Wm. H. Thomson.

Alternates.

Dr. S. A. Purdy,
J. J. Conolly,
J. P. Garrish,
J. W. Greene,
Dr. J. P. Loines,
J. R. Van Kleek,
Wm. F. Thoms,
Cyrus Ramsey.

List of Members

Dr. J. G. Adams,
C. R. Agnew,
James Anderson,
Thomas S. Bahan,
R. A. Barry,
W. Beach,
J. C. Beales,
G. S. Bedford,
W. B. Bibbins,
Wm. N. Blakeman,
S. Blois,
E. Bradley,
J. L. Brown,
H. M. Brush,
G. Buck,
H. D. Bulkley,
J. Busteed,
A. Calkins,
J. M. Carnochan,
G. Carter,
W. M. Chamberlain,
T. E. Chalmers,
S. R. Childs,
P. F. Clark,
J. W. G. Clements,
A. Clinton,
T. Cock,
T. F. Cock,
W. Cockroft,
J. Collett,
D. S. Conant,
A. B. Conant (deceased),
J. J. Connolly,
I. B. Craft,
J. S. Crane,
J. Davis,
E. Delafield,
W. Detmold,
J. H. Douglas,
H. S. Downs,

Dr. B. Drake,
A. Dubois,
A. Elder,
E. Eliot,
S. C. Ellis,
L. Elsberg,
H. P. Farnham,
J. O. Farrington,
H. M. Field,
T. C. Finnell,
A. Flint,
J. Foster,
S. C. Foster,
M. Freeman,
G. Furman,
J. P. Garrish,
S. Geer,
L. A. Gescheidt,
J. T. Gibert,
J. T. Gilford,
H. Green,
J. W. Green,
T. B. Griffin,
S. L. Griswold,
T. M. Halstead,
H. Harriot,
J. Hart,
A. J. Henriques,
C. Henschel,
G. Herriot,
S. T. Hubbard,
J. J. Hull,
G. Hunter,
N. C. Husted,
W. C. Hunter,
J. Hyslop,
F. H. Jackson,
W. H. Jackson,
E. H. Janes,
S. S. Keene,
J. Kennedy,
J. A. Kerrigan,
J. S. Kilbourne,
J. B. Kissam,
J. Knight,
S. S. Kuypers,
E. Lee Jones,
G. Landsmann,
J. S. Lawrence,

Dr. J. R. Leaming,
B. Lee,
J. H. Leveridge,
J. Linsly,
J. L. Little,
D. C. Logue,
J. P. Loines,
E. G. Ludlow,
J. Lynch,
J. R. Mansfield,
T. M. Markoe,
W. H. Maxwell,
C. McCaffrey,
H. E. McCartin,
J. McClelland,
J. R. McComb,
B. W. McCready,
J. B. McEwen,
J. K. Merritt,
J. Messenger,
J. S. Miller,
M. Morris,
B. Mott,
W. Murphy,
J. B. Nelson,
R. T. Newman,
E. S. Nichols,
P. Nolan,
H. T. Noyes,
W. O'Donnell,
B. Ogden,
R. S. O'Sullivan,
F. N. Otis,
M. Paine,
W. Parker,
E. R. Peaslee,
S. R. Percy,
J. L. Phelps,
J. O. Pond,
A. C. Post,
C. Prince,
A. S. Purdy,
S. A. Purdy,
H. F. Quackenboss,
C. Ramsey,
B. I. Raphael,
E. G. Rawson,
J. B. Reynolds,
W. C. Roberts,

Dr. J. Robinson,
B. R. Robson,
W. Rockwell,
S. Rogers,
G. A. Sabine,
L. A. Sayre,
W. Sherman,
H. Senff,
J. Shanks,
J. W. Sheppard,
W. Sharrock,
G. F. Shrady,
D. P. Smith,
James O. Smith,
Jos. M. Smith,
S. Hanbury Smith,
J. C. Smith,
M. P. Stephenson,
J. Sterling,
A. H. Stevens,
J. E. Stillwell,
W. E. Stillwell,
J. O. Stone,
E. Storer,
C. F. Taylor,
I. E. Taylor,
W. F. Thoms,
Dr. W. H. Thomson,
G. T. Totten,
A. H. Turner,
J. T. Tuttle,
A. Underhill,
J. L. Vandervoort,
M. D. Vandoren,
J. R. Van Kleek,
J. E. Ward,
T. Ward,
E. B. Warner,
J. E. Steel,
J. Warren,
O. P. Wells,
A. L. White,
O. White,
S. P. White,
A. B. Whiting,
H. N. Wilhelm,
G. Wilkes,
H. E. Williams,
M. W. Williams,
J. R. Wood,
Isaac Wood,
Stephen Wood,
J. Wooster.

Total—190.

ONEIDA COUNTY.

Officers.

Dr. C. B. Coventry, President.
Walter Booth, Vice-President.
Wm. Russell, Secretary.
D. G. Thomas, Treasurer.
W. B. Coventry, Librarian.

Censors.

Dr. S. G. Wolcott, Dr. J. V. Cobb, Dr. Alonzo Putman.
Dr. Jacob Hunt, Dr. F. M. Barrows.

Delegates to the State Medical Society.

Dr. M. C. West, Dr. Thomas Spears,
Isaac H. Douglass, Alonzo Putman.

Delegates to the American Medical Association.

Dr. John McCall, Dr. Jacob Hunt, Dr. J. M. Sturtevant,
J. V. Cobb, James S. Whaley,
Austin A. Barrows, Louis A. Turtelot.

ONONDAGA COUNTY.

Officers.

Dr. William Manlius Smith, President.
Hezekiah Joslyn, Vice-President.
George W. Cook, Secretary.
Wm. A. Bennett, Treasurer.

Censors.

Dr. A. J. Dallas, Camillus, Dr. J. F. Trowbridge, Syracuse,
J. V. Kendall, Baldwinsville, Ashbel Searl, Onon. Valley,
Dr. J. P. Dunlap, Syracuse.

Delegates to the State Medical Society.

Dr. Israel Parsons, Dr. H. D. Didama, Dr. Wm. Manlius Smith.

List of Members.

Dr. Hiram Adams, Fabius,
Levi Bartlett, Skaneateles,
M. D. Benedict, do
F. M. Byington, Fayetteville,
Wm. A. Bennett, Syracuse,
L. D. Clark, Elbridge,
Judson Caudee, Pompey Centre,
George W. Cook, Syracuse,
A. J. Dallas, Camillus,
H. D. Didama, Salina,
J. P. Dunlap, Syracuse,
George W. Draper, Euclid,
George W. Earll, Skaneateles,
James Foran, Syracuse,
S. M. Higgins, Memphis,
James F. Johnson, Euclid,
Hezekiah Joslyn, Syracuse,
J. V. Kendall, Baldwinsville,
Samuel Kingsley, S. Onondaga,
Jonathan Kneeland, do
W. O. Luce, Elbridge,
Alfred Mercer, Syracuse,
Isaac Morrell, Borodino,
Horace Nims, Manlius,
Israel Parsons, Marcellus,
Robert Treat Paine, Jordan,
Robert Treat Paine, jr., Jordan,
W. W. Porter, Geddes,
Elijah Park, La Fayette,
—— Palmer, Salina,
L. L. Rose, La Fayette,
Ashbel Searl, Onon. Valley,
A. B. Shipman, Syracuse,
J. O. Shipman, do
Wm. Manlius Smith, Manlius,
Jehial Stearns, Pompey Hill,
C. S. Sterling, Liverpool,
A. V. R. Snyder, Euclid,
J. P. Shumway, Baldwinsville,
Lewis C. Skinner, Belleisle,
Wm. Taylor, Manlius,
Lake I. Tefft, Syracuse,
N. R. Tefft, Onon. Hill,
J. F. Trowbridge, Syracuse,
Jared Wheeler, Elbridge,
David Wilson, do
O. E. Wainwright, Syracuse,
D. B. Van Slyke, do
Hiram Wiggins, Cicero,
H. A. Weed, Jordan,
H. B. Wilbur, Syracuse.

ORANGE COUNTY.

Officers.

Dr. John N. Taylor, President.
S. W. Esray, Vice-President.
George E. Putney, Secretary.
D. C. Winfield, Treasurer and Librarian.

Censors.

Dr. J. N. Taylor, Dr. A. Goodman,
S. C. Smith, Wm. P. Townsend,
George Sears.

Delegate to the State Medical Society.

Avery Cook.

Delegate to the National Medical Association.

William P. Townsend.

RENSSELAER COUNTY.

Officers.

Dr. H. A. Carrington, President.
Wm. Cooper, Vice-President.
M. Felter, Secretary.
L. McLean, Treasurer.

Censors.

Dr. T. C. Brinsmade, Dr. T. W. Blatchford,
A. Wotkyns, A. D. Hull.

Delegates to the State Medical Society.

Dr. F. B. Parmlee, Dr. H. W. Fowler, Dr. E. W. Carmichael.

RICHMOND COUNTY.

Officers.

Dr. D. A. Edgar, President.
T. C. Moffatt, Vice-President.
G. W. Richardson, Secretary.
Isaac Lea, Treasurer.

Delegate to the State Medical Society.

Dr. W. C. Anderson.

List of Members.

Dr. W. C. Anderson, Dr. J. C. Cavelti,
I. G. Clark, James R. Boardman,
W. G. Eadie, James Harcourt,
E. C. Mundy, N. S. Burdett,
Theo. Walser, Howard R. Harrison.

ROCKLAND COUNTY.

Officers.

Dr. M. C. Hasbrouck, President.
S. S. Stone, Vice-President.
Wm. Govan, Secretary.
Jacob S. Wigton, Treasurer.
Jacob C Harring, Librarian.

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Erratta.

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